STR-SE381

SERVICE MANUAL

US Model

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SPECIFICATIONS

Audio power specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 40 - 20,000 Hz, rated 60 watts per channel minimum RMS power, with no more than 0.5% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Stereo mode (8 ohms at 40 Hz - 20 kHz less than 0.5% total harmonic distortion)
60 W + 60 W

Surround mode (8 ohms at 1 kHz, THD 0.5%)
Front: 60 W/ch
Center: (Pro Logic Mode)
60 W
Rear: 60 W/ch

Frequency response PHONO: RIAA
equalization curve ±0.5 dB
TV/DBS, CD, TAPE/MD, VIDEO INPUT
10 Hz - 50 kHz ±1 dB

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO (MM)	2.5 mV	50 Kilohms	72 dB* (A, 2.5 mV)
CD	400 mV		
TAPE/MD, TV/DBS, VIDEO	250 mV	50 Kilohms	82 dB* (A, 150 mV)

*78 IHF

Outputs
TAPE/MD REC OUT:
Voltage: 150 mV,
Impedance: 10 kilohms
VIDEO AUDIO OUT:
Voltage: 150 mV,
Impedance: 10 kilohms
PHONES:
Accepts low and high impedance headphones

Muting Full mute
BASS BOOST +10 dB at 70 Hz
TONE ±8 dB at 100 Hz and 10 kHz

FM tuner section

Tuning range 87.5 - 108.0 MHz
Antenna terminals 75 ohms, unbalanced
300 ohms, balanced
Sensitivity Mono: 18.3 dBf, 4.5 µV
Stereo: 38.3 dBf, 45 µV
Usable sensitivity 11.2 dBf, 2 µV (IHF)
S/N Mono: 76 dB
Stereo: 70 dB
Harmonic distortion at 1 kHz
Mono: 0.3%
Stereo: 0.59%
Separation 45 dB at 1 kHz
Frequency response 30 Hz - 15 kHz $^{+0.5}_{-2}$ dB
Selectivity 60 dB at 400 kHz

AM tuner section

Tuning range 531 - 1710 kHz
Antenna Loop antenna
Usable sensitivity 50 dB/m (at 1,000 kHz)
S/N 54 dB (at 50 mV/m)
Harmonic distortion 0.5% (50 mV/m, 400 kHz)
Selectivity At 10 kHz: 40 dB

— Continued on next page —

FM STEREO/FM-AM RECEIVER

MICROFILM

SONY®

General

System	Tuner section: PLL quartz-locked digital synthesizer system Preamplifier section: Low-noise NF type equalizer Power amplifier section: Pure-complementary SEPP
Power requirements	120 V AC, 60 Hz
Power consumption	150 W
AC outlets	2 switched, total 120 W/1A Max
Dimensions	$17 \times 5\ ^{7}/_{8} \times 11\ ^{5}/_{8}$ inches ($430 \times 145 \times 295$ mm)
Mass (Approx.)	14 IB 5 oz (6.5 kg)
Supplied accessories	FM wire antenna (1) AM loop antenna (1) Remote controller (remote) (1) Size AA (R6) batteries (2)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

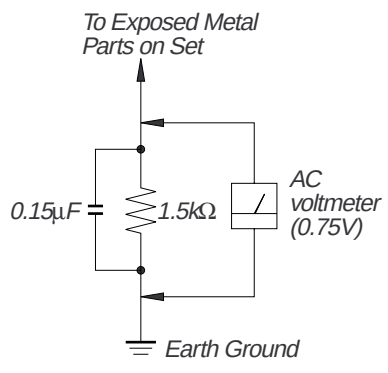

Fig. A. Using an AC voltmeter to check AC leakage.

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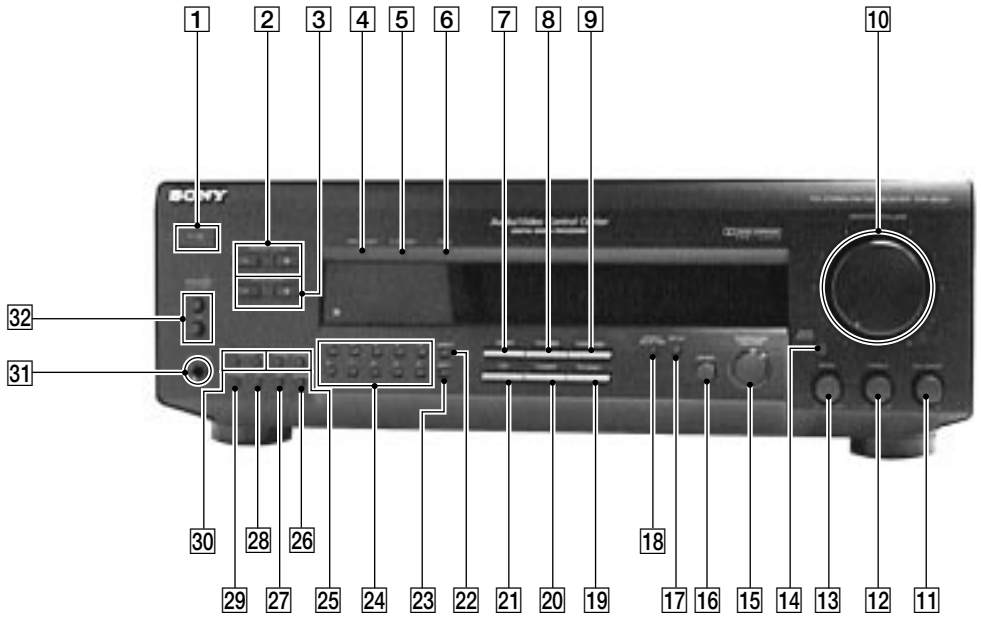
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

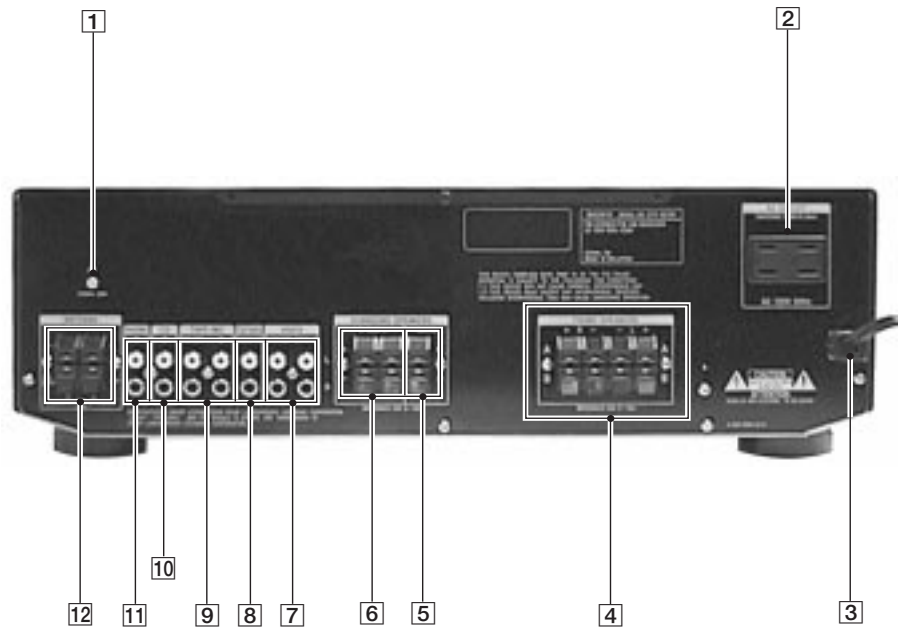
SECTION 1
GENERAL

LOCATION AND FUNCTION OF CONTROLS
[FRONT PANEL]



1 POWER switch (I/⏻)
2 CENTER LEVEL +, – buttons
3 REAR LEVEL +, – buttons
4 PRO LOGIC indicator
5 C. STUDIO indicator
6 HALL indicator
7 VIDEO FUNCTION button
8 TV/DBS FUNCTION button
9 TAPE/MD FUNCTION button
10 MASTER VOLUME control
11 BALANCE control
12 TREBLE control
13 BASS control
14 BASS BOOST button/indicator
15 SURROUND ON/OFF button
16 MODE button
17 SET UP button
18 EFFECT/DELAY TIME button
19 PHONO FUNCTION button
20 TUNER FUNCTION button
21 CD FUNCTION button
22 DIRECT button
23 SHIFT button
24 Numeric buttons
25 PRESET TUNING +, – buttons
26 MEMORY button
27 AM button
28 FM button
29 FM MODE button
30 TUNING +, – buttons
31 PHONES jack
32 SPEAKERS A/B switch

[REAR PANEL]



1 ⏚ SIGNAL GND
2 AC OUTLET
3 AC power cord
4 FRONT SPEAKERS (A/B)
5 SURROUND SPEAKERS (CENTER)
6 SURROUND SPEAKERS (REAR)
7 VIDEO
8 TV/DBS
9 TAPE/MD
10 CD
11 PHONO
12 ANTENNA (AM/FM)

SECTION 2
TEST MODE

INITIALIZATION MODE

* All preset contents are cleared when this mode is activated. Use this mode before returning the product to clients upon completion of repair.
* Procedure:
  While depressing the VIDEO, TAPE/MD and the CD buttons simultaneously, press the power [I/⏻] button to turn on the main power. The message INITIAL appears and initialization is performed.

FLUORESCENT INDICATOR TUBE TEST MODE

* All fluorescent segments are tested. When this test is activated, all segments turn on at the same time, then each segment turns on one after another.
* Procedure:
  While depressing the CD and the TAPE/MD buttons simultaneously, press the power [I/⏻] button to turn on the main power. All segments turn on at the same time, then each segment turns on one after another. The message FINISH appears when this test is complete.

AM CHANNEL STEP 9 kHz/10 kHz SELECTION MODE

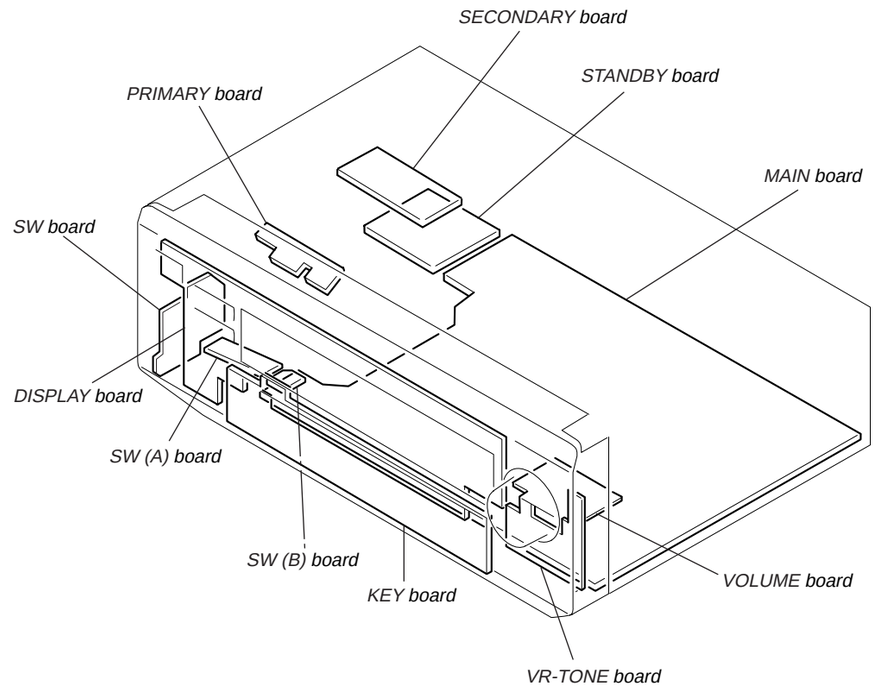
* Either the 9 kHz step or 10 kHz step can be selected for the AM channel step.
* Procedure:
  Set the FUNCTION to AM. Turn off the main power.
  While depressing the TUNING+ button, press the power [I/⏻] button to turn on the main power. Either the message 9k STEP or 10k STEP appears. Select the desired step.

REAR SPEAKER GAIN UP MODE

* The rear speaker gain can be set to either NORMAL or GAIN UP.
* Procedure:
  While depressing the -SURROUND button, press the power [I/⏻] button to turn on the main power. Either the message NORMAL or GAIN UP appears. When the product enters this mode again, the other gain appears. Select the desired gain.

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this necessary note is printed in each block.)

For schematic diagrams.
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

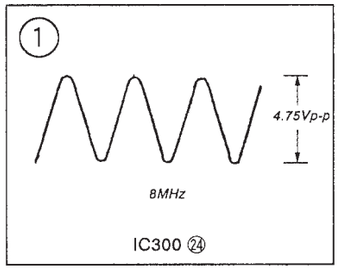
Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

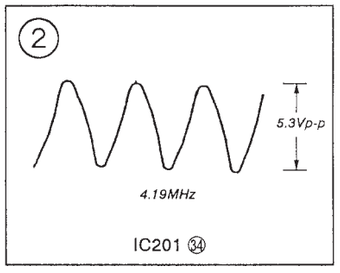
- B+ : B+ Line.
- B− : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  No mark : FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM

For printed wiring boards.
Note:

- ⊶—— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

• Waveforms

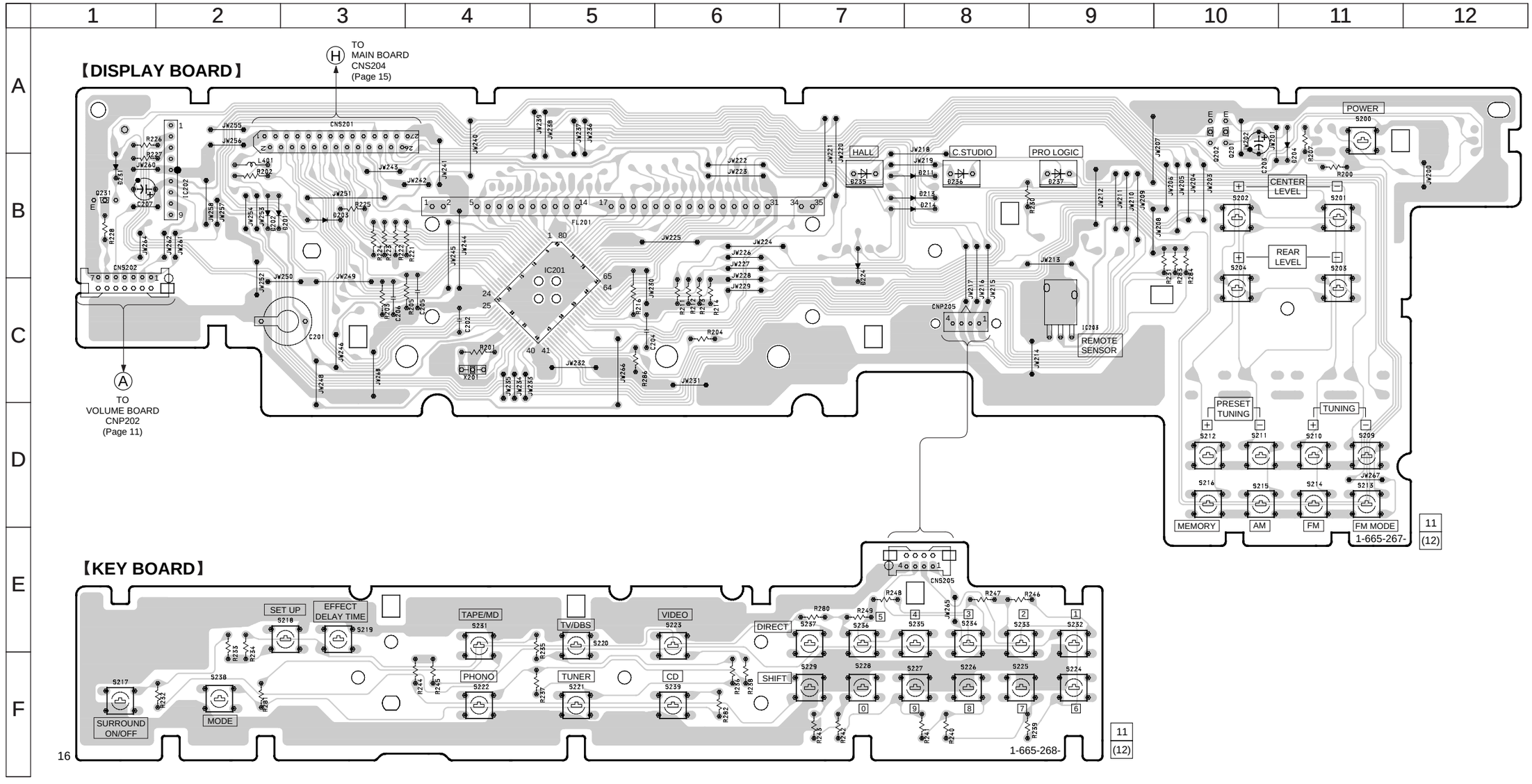




3-2. PRINTED WIRING BOARD — DISPLAY SECTION —

• Semiconductor Location

Ref. No.	Location
D201	B-2
D202	B-2
D203	B-3
D204	A-11
D211	B-8
D213	B-8
D214	B-8
D224	B-7
D231	B-1
D235	B-7
D236	B-8
D237	B-9
IC201	B-5
IC202	B-2
IC203	C-9
Q201	A-10
Q202	A-10
Q231	B-1



3-3. SCHEMATIC DIAGRAM — DISPLAY SECTION —

• See page 6 for Waveforms. • See page 25 for IC Pin Functions. • See page 27 for IC Block Diagrams.

【DISPLAY BOARD】

IC203 REMOTE SENSOR

FL201 FLUORESCENT INDICATOR TUBE

IC201 SYSTEM CONTROL

IC202 VOLUME MOTOR CONTROL

CNS201 — MAIN BOARD CNS204 (Page 17)

GND	1
+5.6V	2
STOP	3
PROTECT IN	4
TUNER MUTE	5
POWER-RY	6
SURR-RY	7
SP-RY	8
STEREO IN	9
AUTO STOP	10
S.CE (LV1010)	11
S.CE (7822, 72130)	12
PLL DATA IN	13
S.DATA	14
S.CLOCK	15
BRIDGE	16
F2	17
F1	18
-24V	19
SIGNAL	20
IC.MUTE	21
F.MUTE	22
SW (RY)	23

CNS202 7P — VOLUME BOARD CNP202 (Page 13)

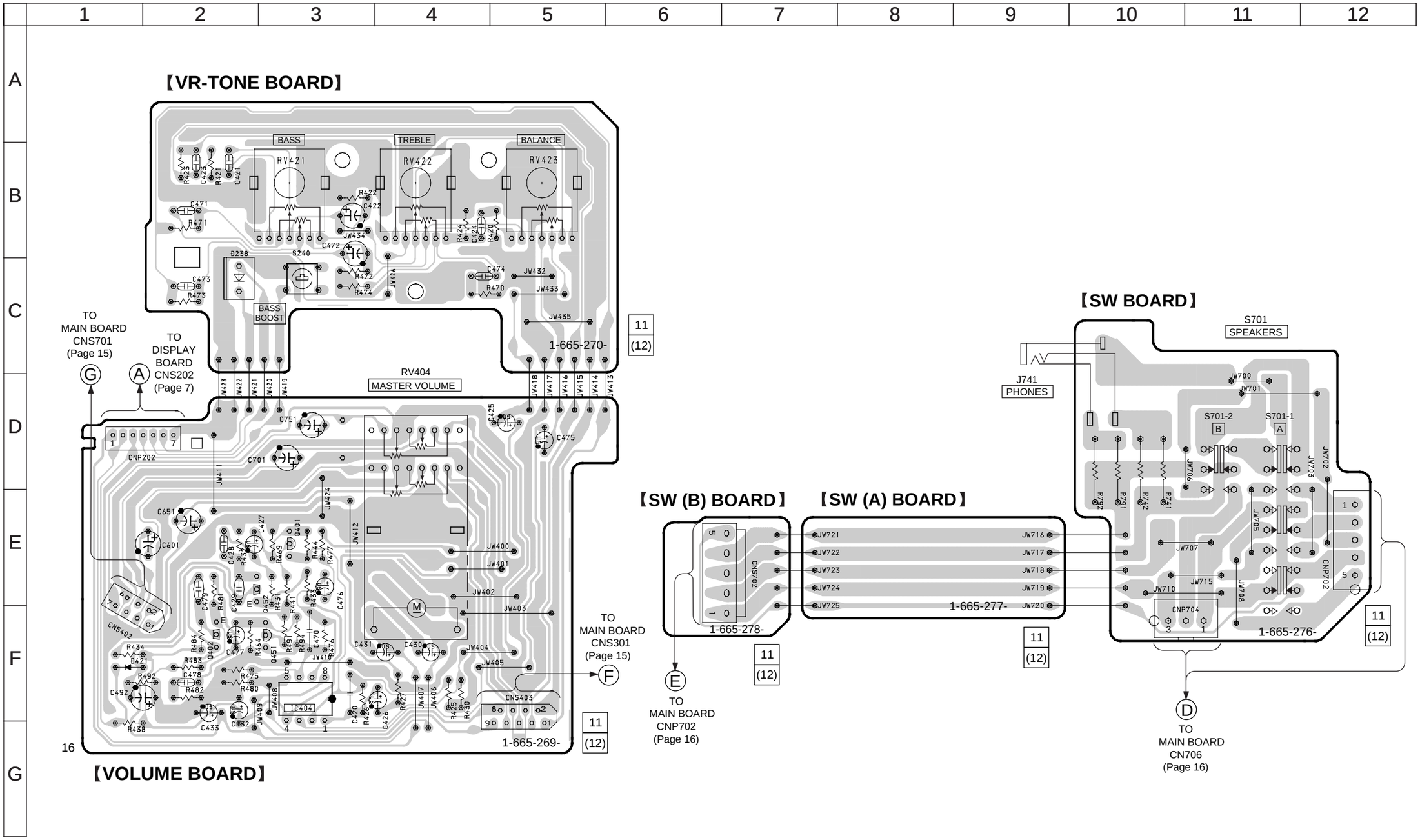
VOL.DOWN	1
VOL.UP	2
BASS.BOOST	3
A/D	4
+5.6V	5
B.BOOST LED	6
GND	7

CNP205 — KEY BOARD CNS205 (Page 13)

3-4. PRINTED WIRING BOARD — VOLUME SECTION —

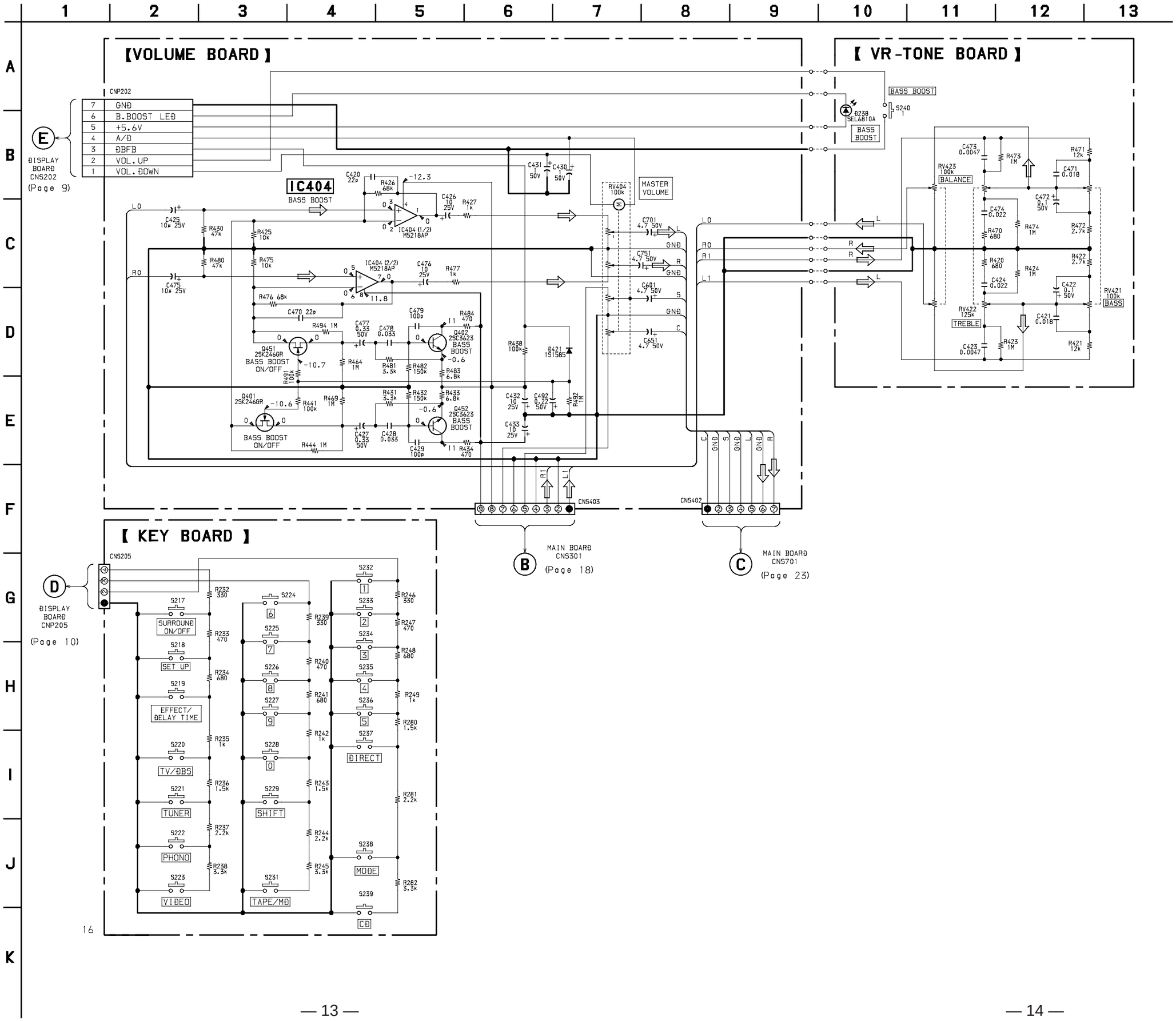
• **Semiconductor Location**

Ref. No.	Location
D238	C-2
D421	F-1
IC404	F-3
Q401	E-3
Q402	F-2
Q451	F-3
Q452	E-2



3-5. SCHEMATIC DIAGRAM — VOLUME SECTION —

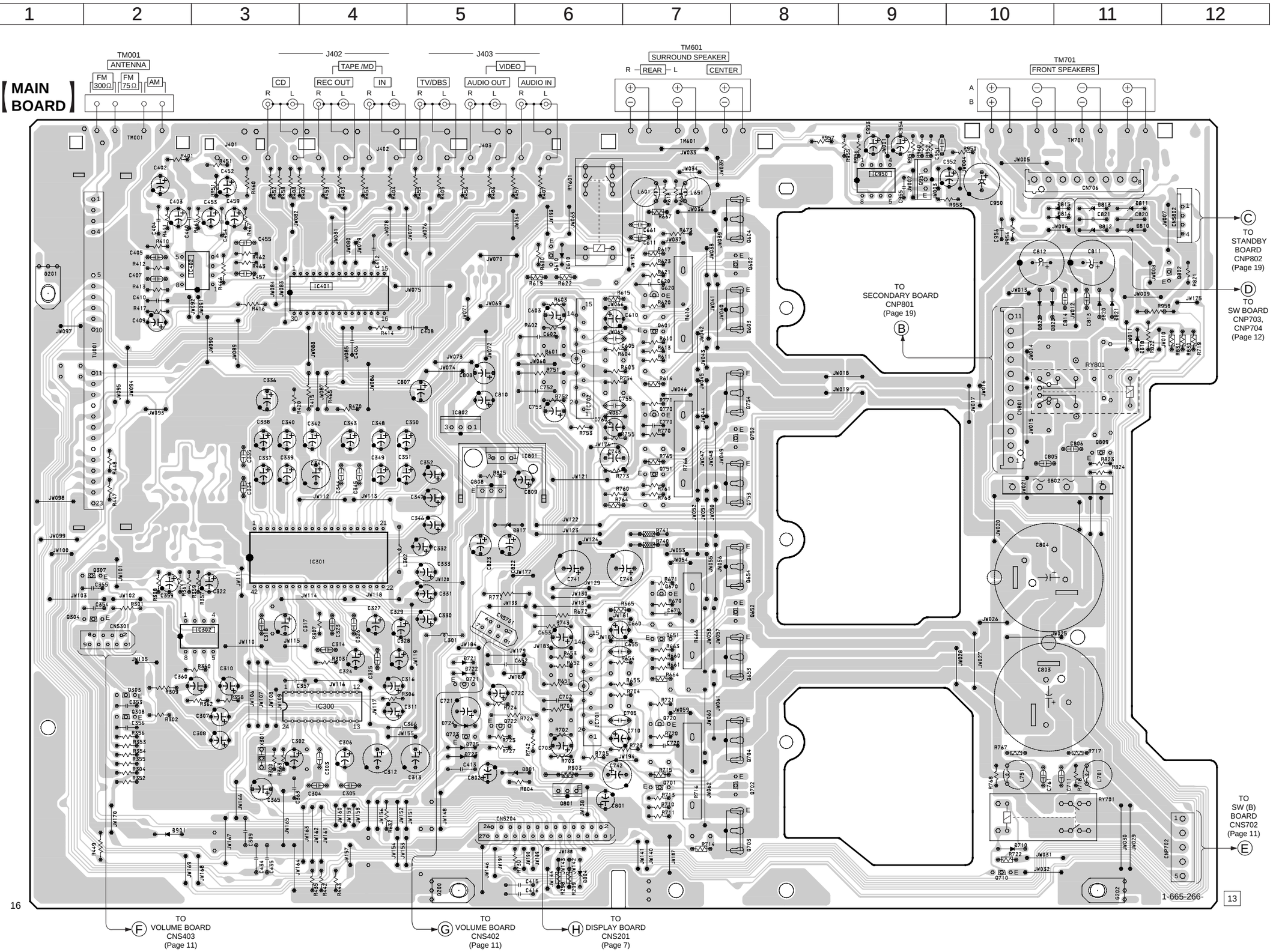
• See page 7 for KEY Board Wiring Board.



3-6. PRINTED WIRING BOARD — MAIN SECTION —

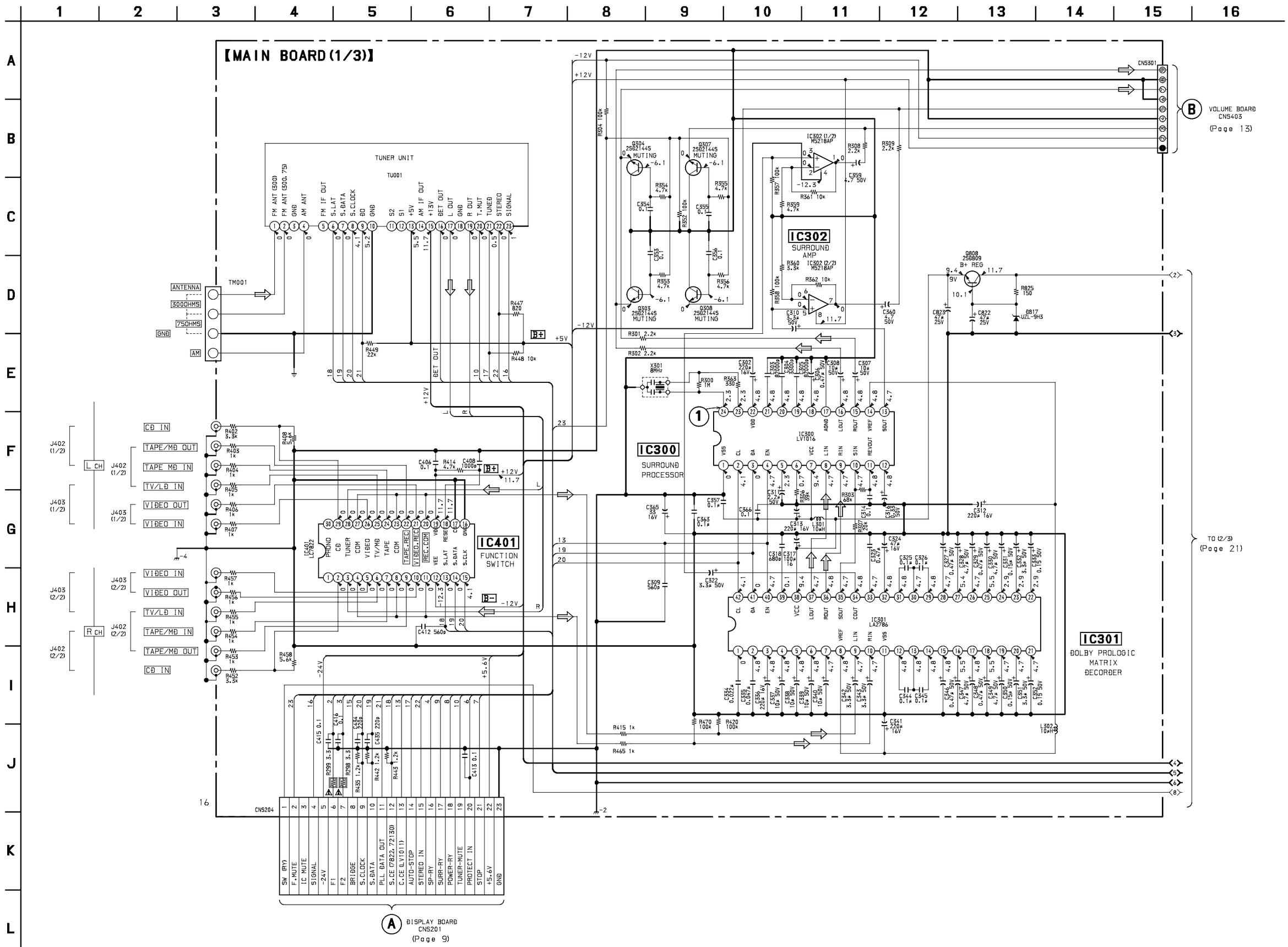
• Semiconductor Location

Ref. No.	Location
D610	C-6
D710	H-10
D721	F-5
D722	F-5
D723	G-5
D724	G-5
D725	G-5
D801	G-5
D802	E-10
D804	H-6
D810	B-11
D811	B-11
D812	B-11
D813	B-11
D814	B-11
D815	B-11
D817	E-5
D818	C-11
D820	C-11
D821	C-11
D822	C-10
D823	C-10
D901	H-2
IC300	G-4
IC301	E-4
IC302	F-3
IC401	C-4
IC402	C-2
IC701	G-6
IC702	D-6
IC801	E-5
IC802	D-5
IC950	B-9
Q303	G-2
Q304	F-2
Q307	F-2
Q308	G-2
Q601	C-7
Q602	C-8
Q603	C-8
Q604	B-8
Q610	C-6
Q620	C-7
Q651	F-7
Q652	F-8
Q653	F-8
Q654	F-8
Q670	F-7
Q701	H-7
Q702	H-8
Q703	H-8
Q704	G-8
Q710	H-10
Q720	G-7
Q721	G-5
Q722	G-5
Q723	G-5
Q751	E-7
Q752	D-8
Q753	E-8
Q754	D-8
Q770	D-7
Q801	H-6
Q802	C-12
Q808	E-5
Q809	D-11
Q951	B-9

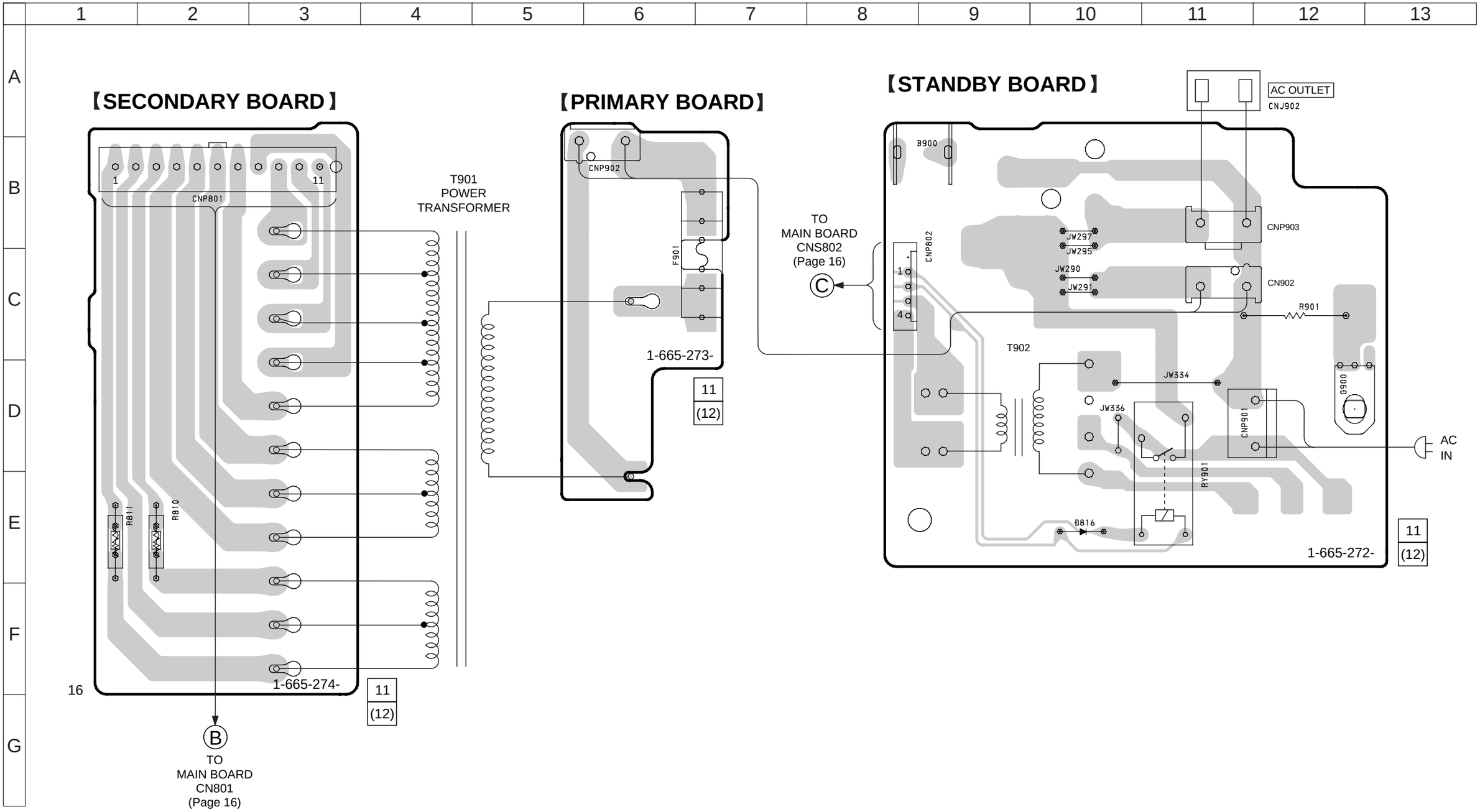


3-7. SCHEMATIC DIAGRAM — MAIN (1/3) SECTION —

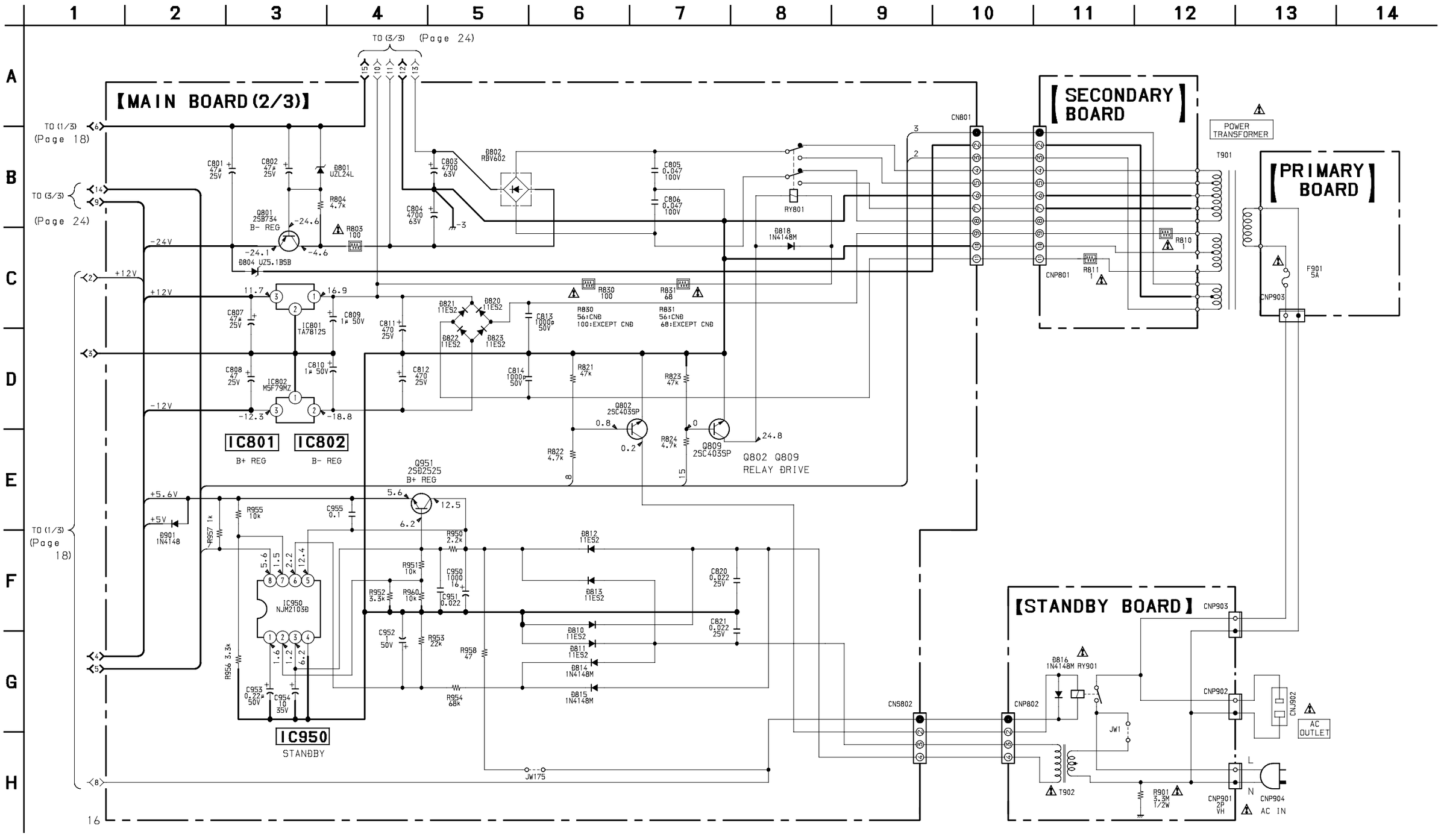
• See page 27 for IC Block Diagrams.



3-8. PRINTED WIRING BOARD — POWER SECTION —

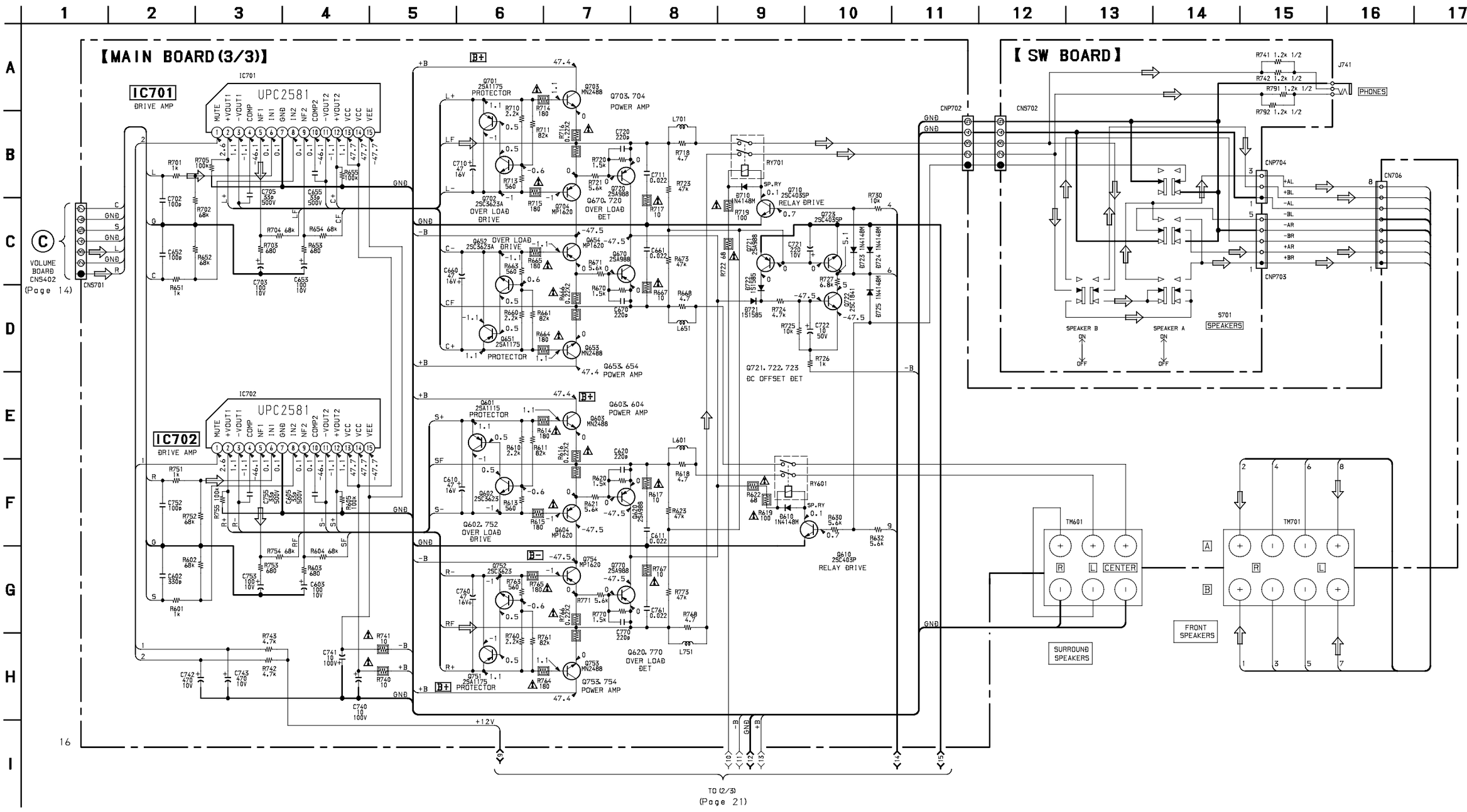


3-9. SCHEMATIC DIAGRAM — MAIN (2/3), POWER SECTION — • See page 27 for IC Block Diagrams.



3-10. SCHEMATIC DIAGRAM — MAIN (3/3), SP SW SECTION —

• See page 12 for SW Board Wiring Board. • See page 27 for IC Block Diagrams.



3-11. IC PIN FUNCTION

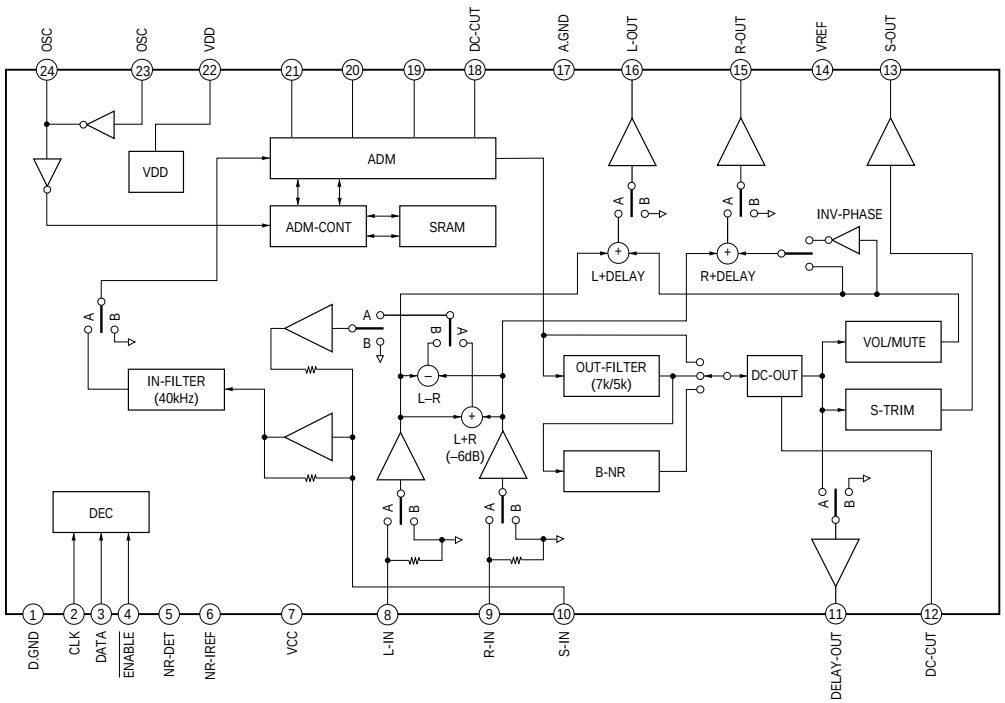
DISPLAY BOARD IC201 : μPD78044FGF-064-3B9 (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	DIG7	O	Fluorescent indicator tube drive.
2	DIG6	O	
3	DIG5	O	
4	DIG4	O	
5	DIG3	O	
6	DIG2	O	
7	DIG1	O	
8	+5V	—	Power supply (+5V).
9	$\overline{\text{S. CLK}}$	I	System clock.
10	$\overline{\text{S. DATA}}$	I	System data.
11	$\overline{\text{PLL. DATA}}$	I	PLL data input from TU001.
12	S. CE (LC7288)	O	Chip enable output.
13	$\overline{\text{S. CE (LV100)}}$	O	Chip enablr output.
14	REAR-R	I	Input for model select.
15	BRIDGE CABLE	O	Standby relay ON/OFF control.
16	PROTECT	I	Protector detect input.
17	$\overline{\text{RESET}}$	I	System reset terminal.
18	$\overline{\text{AUTO-STOP}}$	I	Auto stop detect input.
19	$\overline{\text{STEREO-IN}}$	I	Stereo detect input.
20	AVss	—	Ground.
21	SP-RY	O	Speaker relay drive.
22	SURR-RY	O	Surround Relay.
23	POWER-RY	O	Power relay drive.
24	Not used	O	Not used.
25	SIGNAL	I	A/D signal input terminal.
26	A/D3	I	A/D3 key input terminal.
27	A/D2	I	A/D2 key input terminal.
28	A/D1	I	A/D1 key input terminal.
29	AVDD	—	Power supply (+5V).
30	AV. REF	—	Reference voltage (+5V).
31	GND	—	Ground.
32	NC	—	Not used (Open).
33	Vss	—	Ground.
34	X1	—	System clock (4.19MHz).
35	X2	—	System clock (4.19MHz).
36	IC. MUTE	O	Mute drive output for μPD2581V (IC701).
37	$\overline{\text{PROLOGIC}}$	—	Prologic LED drive.
38	$\overline{\text{CSTUDIO}}$	—	CINEMA STUDIO LED drive.
39	$\overline{\text{HALL}}$	—	Hall LED drive.
40	T. MUTE	O	Tuner mute drive output.

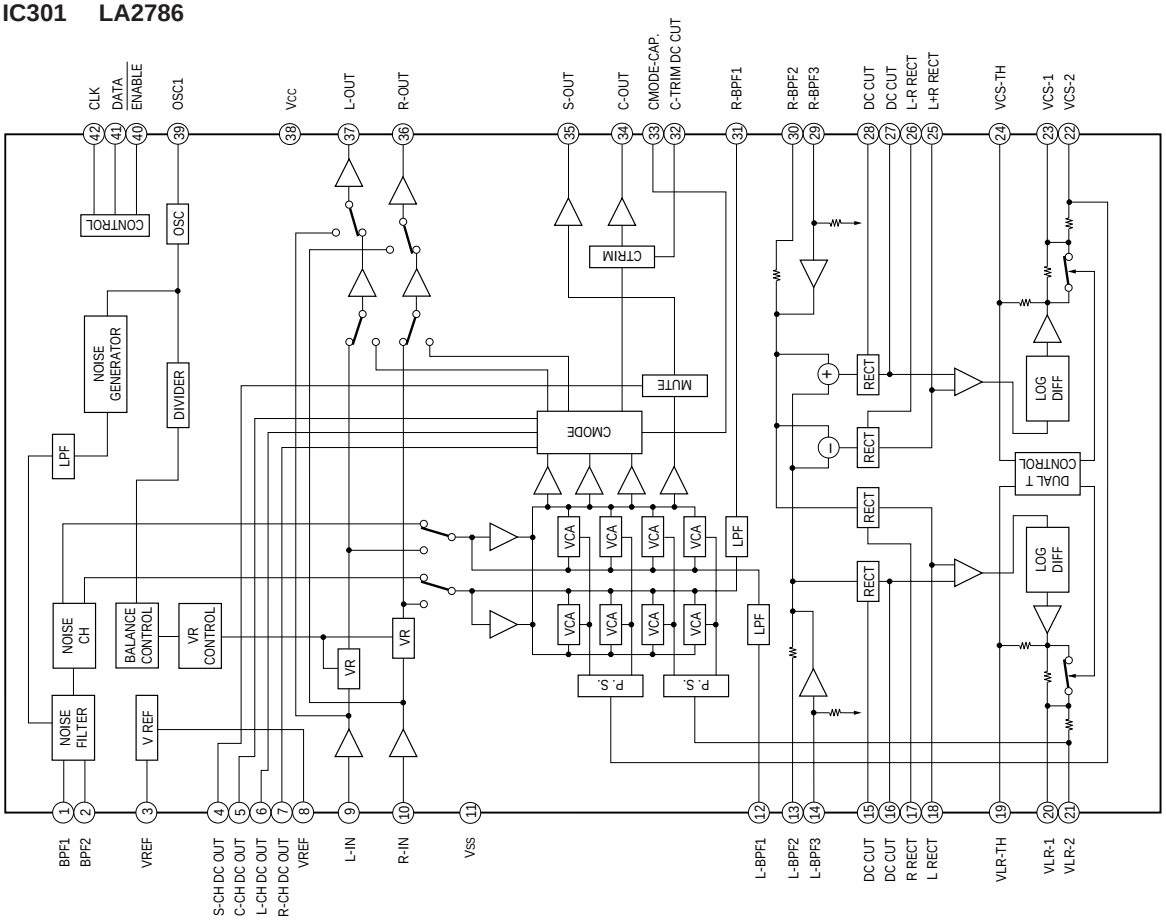
Pin No.	Pin Name	I/O	Description
41	VOLUME UP	O	Volume up.
42	VOLUME DOWN	O	Volume down.
43	$\overline{\text{STANDBY}}$	—	Standby LED drive.
44	$\overline{\text{SYS. POWER}}$	I	System power ON/OFF.
45	RDS. DATA. IN	I	RDS data input terminal (EXCEPT Australian, E, Saudi Arabia, PX model).
46	RDS. CLK. IN	I	RDS clock input terminal (EXCEPT Australian, E, Saudi Arabia, PX model).
47	$\overline{\text{STOP}}$	I	Stop signal input from NJM2103D (IC950).
48	Vss	—	Ground.
49	$\overline{\text{SIRCS}}$	I	Sircs signal input.
50	$\overline{\text{POWER SW}}$	I	Power switch input terminal.
51	5.1ch LED	O	5.1ch input LED.
52	+5V	—	Power supply (+5V).
53	BASS BOOST	—	Bass boost LED drive.
54	FUNC. MUTE	O	Line mute drive.
55	SL MUTE	O	Surround Lch mute.
56	VERSION	I	Input for model select.
57	K14	I	Key in 4.
58	K13	I	Key in 3.
59	K12	I	Key in 2.
60	K11	I	Key in 1.
61	SR MUTE	O	Surround Rch mute.
62	S15	O	Key out 1.
63	S14	O	Key out 2.
64	S13	O	Key out 3.
65	S12	O	Key out 4.
66	S11	O	Fluorescent indicator tube drive.
67	S10	O	
68	S9	O	
69	S8	O	
70	S7	O	
71	VLOAD	—	Connect to –24V.
72	S6	O	Fluorescent indicator tube drive.
73	S5	O	
74	S4	O	
75	S3	O	
76	S2	O	
77	S1	O	
78	DIG10	O	Fluorescent indicator tube drive.
79	DIG9	O	
80	DIG8	O	

3-12. IC BLOCK DIAGRAMS

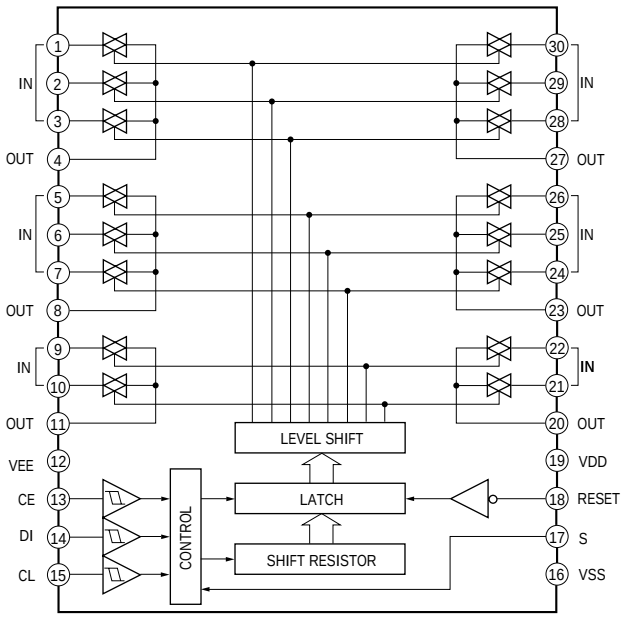
IC300 LV1016



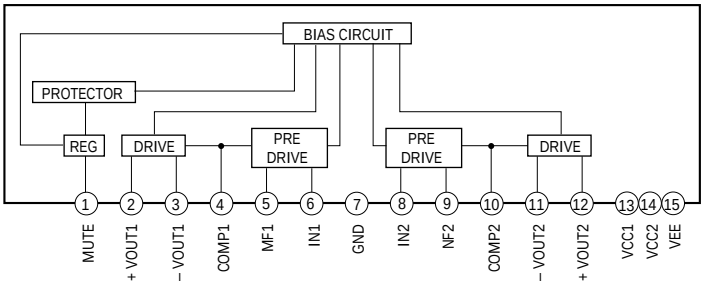
IC301 LA2786



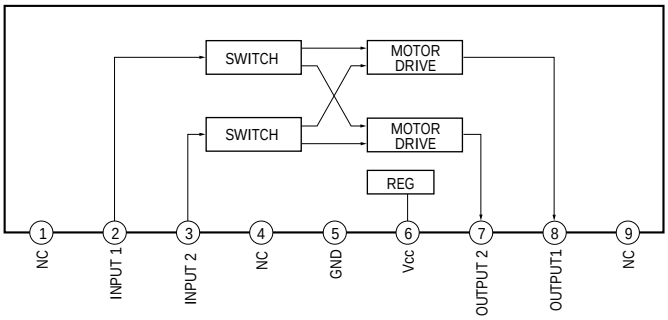
IC401 LC7822



IC701 µPC2581



IC202 BA6208



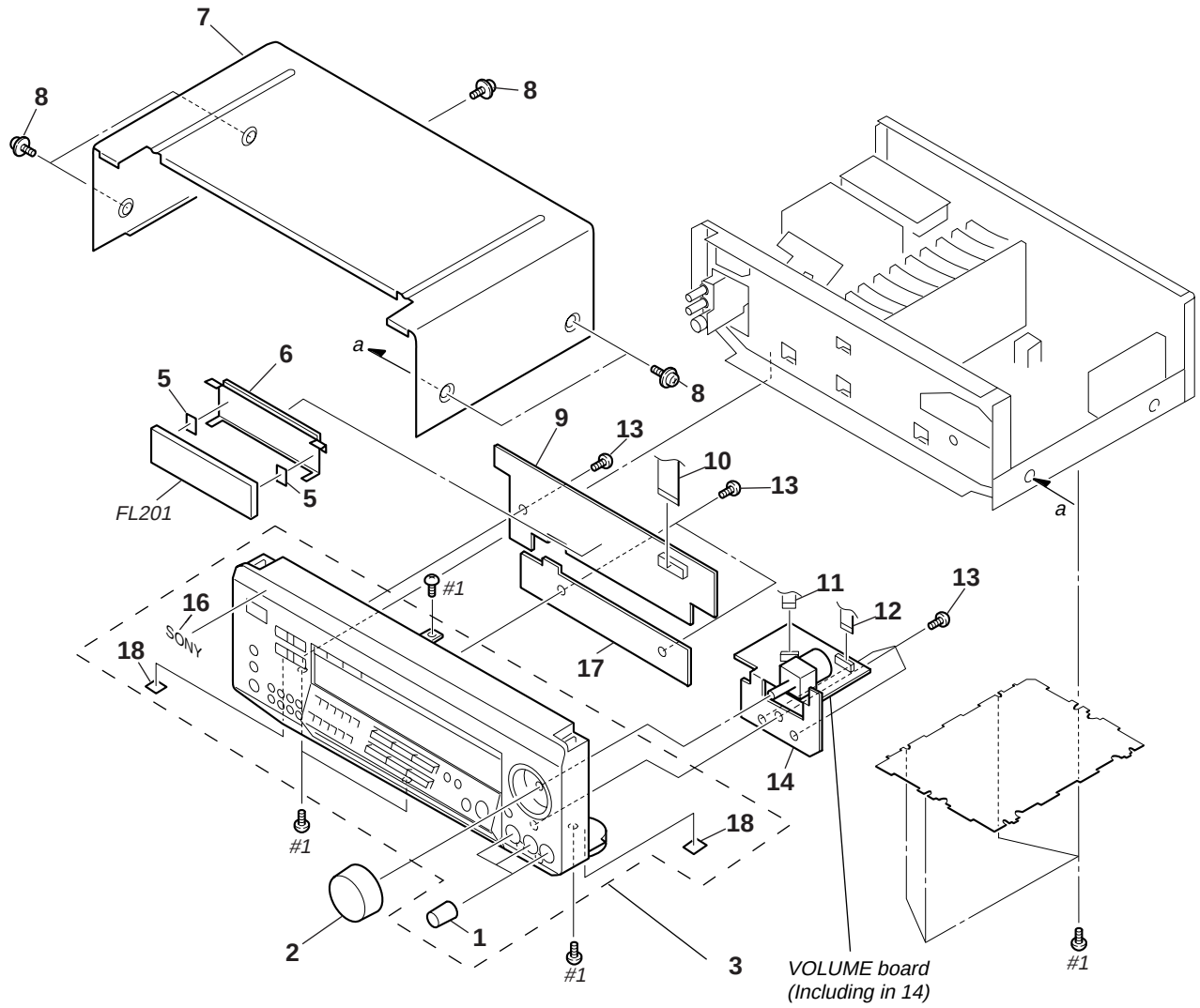
SECTION 4
EXPLODED VIEWS

Note:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

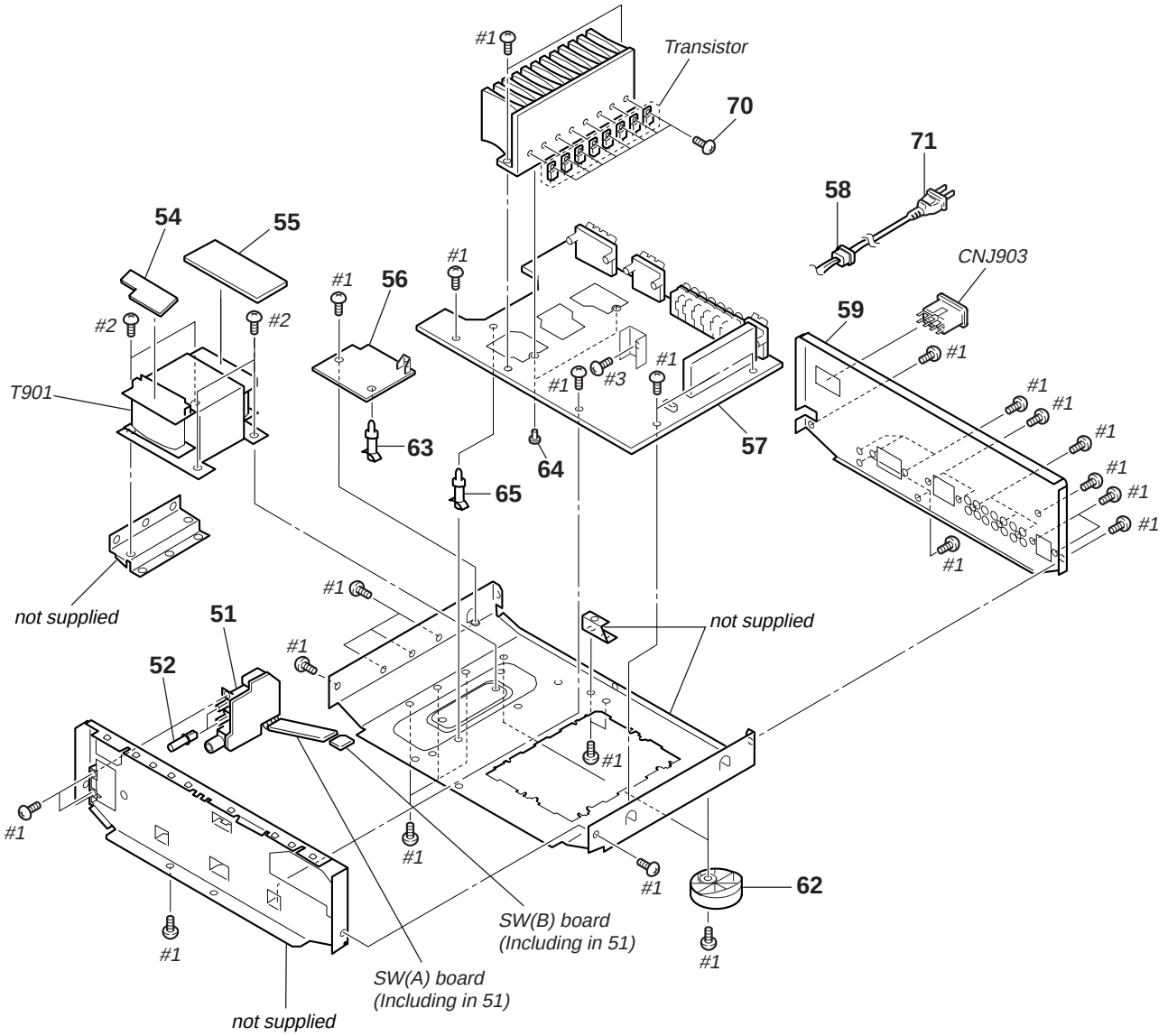
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

4-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-980-639-01	KNOB (R14)	
2	X-4946-873-1	KNOB (R48) ASSY	
3	X-4949-646-1	FRONT PANEL ASSY	
* 5	4-921-941-01	CUSHION (FL)	
* 6	4-943-107-11	HOLDER (FL TUBE)	
* 7	4-980-658-01	CASE (413226)	
8	3-710-901-11	SCREW, TAPPING	
* 9	A-4407-427-A	DISPLAY BOARD, COMPLETE	
10	1-782-100-11	WIRE (FLAT TYPE) (23 CORE)	
11	1-782-075-11	WIRE (FLAT TYPE) (9 CORE)	
12	1-782-074-11	WIRE (FLAT TYPE) (7 CORE)	
13	4-951-620-01	SCREW (2.6 × 8), +BVTP	
* 14	A-4407-429-A	VR-TONE BOARD, COMPLETE	
16	3-008-600-11	EMBLEM (5-AR), SONY	
* 17	A-4407-430-A	KEY BOARD, COMPLETE	
18	4-977-358-11	CUSHION	
FL201	1-517-141-11	INDICATOR TUBE, FLUORESCENT	

4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
* 51	A-4407-460-A	SW BOARD, COMPLETE	
52	4-951-801-01	BUTTON (S)	
* 54	1-665-273-11	PRIMARY BOARD	
* 55	1-665-274-11	SECONDARY BOARD	
* 56	1-665-272-11	STANDBY BOARD	
* 57	A-4407-426-A	MAIN BOARD, COMPLETE	
* 58	3-703-244-00	BUSHING (2104), CORD	
* 59	4-997-684-01	BACK PANEL	

Ref. No.	Part No.	Description	Remarks
62	X-4947-208-1	FOOT ASSY (F50150S)	
63	4-924-098-01	HOLDER, PC BOARD	
64	4-812-134-00	RIVET (DIA. 3.5), NYLON	
* 65	4-954-051-51	HOLDER, PC BOARD	
70	3-905-609-01	SCREW (TRANSISTOR)	
⚠71	1-777-070-21	CORD, POWER	
⚠CNJ903	1-251-698-11	OUTLET (AC) (2P)	
⚠T901	1-431-258-21	TRANSFORMER, POWER	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY

Note:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-4407-427-A	DISPLAY BOARD, COMPLETE **********			
*	4-921-941-01	CUSHION (FL)			
*	4-943-107-11	HOLDER (FL TUBE)			
		< CAPACITOR >			
C201	1-104-905-11	CAPACITOR	0.22F		5.5V
C202	1-164-159-11	CERAMIC	0.1uF		50V
C203	1-124-465-00	ELECT	0.47uF	20%	50V
C204	1-164-159-11	CERAMIC	0.1uF		50V
C205	1-162-294-31	CERAMIC	0.001uF	10%	50V
C206	1-164-159-11	CERAMIC	0.1uF		50V
C207	1-126-096-11	ELECT	10uF	20%	35V
		< CONNECTOR >			
CN703	1-764-474-11	PIN, CONNECTOR (PC BOARD) 5P			
CNP205	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P			
CNS201	1-568-742-11	SOCKET, CONNECTOR 23P			
CNS202	1-770-400-11	HOUSING, CONNECTOR (PC BOARD) 7P			
		< DIODE >			
D201	8-719-911-19	DIODE 1SS119			
D202	8-719-911-19	DIODE 1SS119			
D203	8-719-911-19	DIODE 1SS119			
D204	8-719-911-19	DIODE 1SS119			
D211	8-719-911-19	DIODE 1SS119			
D213	8-719-911-19	DIODE 1SS119			
D214	8-719-911-19	DIODE 1SS119			
D224	8-719-911-19	DIODE 1SS119			
D231	8-719-911-19	DIODE 1SS119			
D235	8-719-313-50	DIODE SEL6810A-TH12			
D236	8-719-313-50	DIODE SEL6810A-TH12			
D237	8-719-313-50	DIODE SEL6810A-TH12			
		< FILTER >			
FL201	1-517-141-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC201	8-759-479-19	IC uPD78044FGF-064-3B9			
IC202	8-759-962-08	IC BA6208			
IC203	8-759-332-18	IC GP1U27XB (REMOTE SENSOR)			
		< COIL >			
L401	1-410-509-11	INDUCTOR	10uH		

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q201	8-729-900-63	TRANSISTOR DTA124ES			
Q202	8-729-900-36	TRANSISTOR DTC124ES			
Q231	8-729-900-36	TRANSISTOR DTC124ES			
		< RESISTOR >			
R200	1-249-433-11	CARBON	22K	5%	1/4W
R201	1-247-903-00	CARBON	1M	5%	1/4W
R202	1-249-429-11	CARBON	10K	5%	1/4W
R203	1-249-429-11	CARBON	10K	5%	1/4W
R204	1-249-425-11	CARBON	4.7K	5%	1/4W F
R205	1-249-441-11	CARBON	100K	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R211	1-249-433-11	CARBON	22K	5%	1/4W
R212	1-249-433-11	CARBON	22K	5%	1/4W
R213	1-249-433-11	CARBON	22K	5%	1/4W
R214	1-249-433-11	CARBON	22K	5%	1/4W
R216	1-249-433-11	CARBON	22K	5%	1/4W
R221	1-247-807-31	CARBON	100	5%	1/4W
R222	1-247-807-31	CARBON	100	5%	1/4W
R223	1-247-807-31	CARBON	100	5%	1/4W
R224	1-247-807-31	CARBON	100	5%	1/4W
R225	1-247-807-31	CARBON	100	5%	1/4W
R226	1-249-441-11	CARBON	100K	5%	1/4W
R227	1-249-441-11	CARBON	100K	5%	1/4W
R228	1-249-412-11	CARBON	390	5%	1/4W F
R230	1-249-410-11	CARBON	270	5%	1/4W F
R231	1-249-427-11	CARBON	6.8K	5%	1/4W F
R283	1-249-427-11	CARBON	6.8K	5%	1/4W F
R284	1-249-427-11	CARBON	6.8K	5%	1/4W F
R286	1-249-437-11	CARBON	47K	5%	1/4W
		< SWITCH >			
S200	1-762-378-11	SWITCH, TACTILE (POWER)			
S201	1-762-378-11	SWITCH, TACTILE (CENTER LEVEL –)			
S202	1-762-378-11	SWITCH, TACTILE (CENTER LEVEL +)			
S203	1-762-378-11	SWITCH, TACTILE (REAR LEVEL –)			
S204	1-762-378-11	SWITCH, TACTILE (REAR LEVEL +)			
S209	1-762-378-11	SWITCH, TACTILE (TUNING –)			
S210	1-762-378-11	SWITCH, TACTILE (TUNING +)			
S211	1-762-378-11	SWITCH, TACTILE (PRESET TUNING –)			
S212	1-762-378-11	SWITCH, TACTILE (PRESET TUNING +)			
S213	1-762-378-11	SWITCH, TACTILE (FM MODE)			
S214	1-762-378-11	SWITCH, TACTILE (FM)			
S215	1-762-378-11	SWITCH, TACTILE (AM)			
S216	1-762-378-11	SWITCH, TACTILE (MEMORY)			

DISPLAY | KEY | MAIN

Ref. No.	Part No.	Description				Remarks
		< VIBRATOR >				
X201	1-577-101-11	VIBRATOR, CERAMIC 4.19MHz				
**********						
*	A-4407-430-A	KEY BOARD, COMPLETE				
		**********				
		< CONNECTOR >				
CNS205	1-770-397-11	HOUSING, CONNECTOR (PC BOARD) 4P				
		< RESISTOR >				
R232	1-249-411-11	CARBON	330	5%	1/4W	
R233	1-249-413-11	CARBON	470	5%	1/4W	F
R234	1-249-415-11	CARBON	680	5%	1/4W	F
R235	1-249-417-11	CARBON	1K	5%	1/4W	F
R236	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R237	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R238	1-247-843-11	CARBON	3.3K	5%	1/4W	
R239	1-249-411-11	CARBON	330	5%	1/4W	
R240	1-249-413-11	CARBON	470	5%	1/4W	F
R241	1-249-415-11	CARBON	680	5%	1/4W	F
R242	1-249-417-11	CARBON	1K	5%	1/4W	F
R243	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R244	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R245	1-247-843-11	CARBON	3.3K	5%	1/4W	
R246	1-249-411-11	CARBON	330	5%	1/4W	
R247	1-249-413-11	CARBON	470	5%	1/4W	F
R248	1-249-415-11	CARBON	680	5%	1/4W	F
R249	1-249-417-11	CARBON	1K	5%	1/4W	F
R270	1-247-807-31	CARBON	100	5%	1/4W	
R280	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R281	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R282	1-247-843-11	CARBON	3.3K	5%	1/4W	
		< SWITCH >				
S217	1-762-378-11	SWITCH, TACTILE (SURROUND ON/OFF)				
S218	1-762-378-11	SWITCH, TACTILE (SET UP)				
S219	1-762-378-11	SWITCH, TACTILE (EFFECT/DELAY TIME)				
S220	1-762-378-11	SWITCH, TACTILE (TV/DBS)				
S221	1-762-378-11	SWITCH, TACTILE (TUNER)				
S222	1-762-378-11	SWITCH, TACTILE (PHONO)				
S223	1-762-378-11	SWITCH, TACTILE (VIDEO)				
S224	1-762-378-11	SWITCH, TACTILE (6)				
S225	1-762-378-11	SWITCH, TACTILE (7)				
S226	1-762-378-11	SWITCH, TACTILE (8)				
S227	1-762-378-11	SWITCH, TACTILE (9)				
S228	1-762-378-11	SWITCH, TACTILE (0)				
S229	1-762-378-11	SWITCH, TACTILE (SHIFT)				
S231	1-762-378-11	SWITCH, TACTILE (TAPE/MD)				
S232	1-762-378-11	SWITCH, TACTILE (1)				
S233	1-762-378-11	SWITCH, TACTILE (2)				
S234	1-762-378-11	SWITCH, TACTILE (3)				
S235	1-762-378-11	SWITCH, TACTILE (4)				
S236	1-762-378-11	SWITCH, TACTILE (5)				
S237	1-762-378-11	SWITCH, TACTILE (DIRECT)				
S238	1-762-378-11	SWITCH, TACTILE (MODE)				
S239	1-762-378-11	SWITCH, TACTILE (CD)				
**********						

Ref. No.	Part No.	Description			Remarks
*	A-4407-426-A	MAIN BOARD, COMPLETE			
		**********			
	3-905-609-01	SCREW (TRANSISTOR)			
	4-812-134-00	RIVET (DIA. 3.5), NYLON			
	7-685-872-09	SCREW +BVTT 3×8 (S)			
		< CAPACITOR >			
C302	1-126-934-11	ELECT	220uF	20%	16V
C303	1-130-494-11	MYLAR	0.082uF	5%	50V
C304	1-137-367-11	FILM	0.0033uF	5%	50V
C305	1-130-494-11	MYLAR	0.082uF	5%	50V
C306	1-126-959-11	ELECT	0.47uF	20%	50V
C307	1-126-964-11	ELECT	10uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-162-291-31	CERAMIC	560PF	10%	50V
C310	1-126-962-11	ELECT	3.3uF	20%	50V
C311	1-126-961-11	ELECT	2.2uF	20%	50V
C312	1-126-934-11	ELECT	220uF	20%	16V
C313	1-126-934-11	ELECT	220uF	20%	16V
C314	1-136-165-00	FILM	0.1uF	5%	50V
C316	1-124-252-00	ELECT	0.33uF	20%	50V
C317	1-126-933-11	ELECT	100uF	20%	16V
C318	1-136-357-11	FILM	680PF	5%	50V
C322	1-126-962-11	ELECT	3.3uF	20%	50V
C323	1-136-173-00	FILM	0.47uF	5%	50V
C324	1-126-967-11	ELECT	47uF	20%	16V
C325	1-136-165-00	FILM	0.1uF	5%	50V
C326	1-136-165-00	FILM	0.1uF	5%	50V
C327	1-126-959-11	ELECT	0.47uF	20%	50V
C328	1-126-963-11	ELECT	4.7uF	20%	50V
C329	1-126-959-11	ELECT	0.47uF	20%	50V
C330	1-126-963-11	ELECT	4.7uF	20%	50V
C331	1-124-250-11	ELECT	0.15uF	20%	50V
C332	1-126-962-11	ELECT	3.3uF	20%	50V
C333	1-124-250-11	ELECT	0.15uF	20%	50V
C334	1-137-372-11	FILM	0.022uF	5%	50V
C335	1-136-161-00	FILM	0.047uF	5%	50V
C336	1-126-934-11	ELECT	220uF	20%	16V
C337	1-126-964-11	ELECT	10uF	20%	50V
C338	1-126-964-11	ELECT	10uF	20%	50V
C339	1-126-964-11	ELECT	10uF	20%	50V
C340	1-126-964-11	ELECT	10uF	20%	50V
C341	1-126-934-11	ELECT	220uF	20%	16V
C342	1-126-962-11	ELECT	3.3uF	20%	50V
C343	1-126-962-11	ELECT	3.3uF	20%	50V
C344	1-136-165-00	FILM	0.1uF	5%	50V
C345	1-136-165-00	FILM	0.1uF	5%	50V
C346	1-126-959-11	ELECT	0.47uF	20%	50V
C347	1-126-963-11	ELECT	4.7uF	20%	50V
C348	1-126-959-11	ELECT	0.47uF	20%	50V
C349	1-126-963-11	ELECT	4.7uF	20%	50V
C350	1-124-250-11	ELECT	0.15uF	20%	50V
C351	1-126-962-11	ELECT	3.3uF	20%	50V
C352	1-124-250-11	ELECT	0.15uF	20%	50V
C353	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-164-159-11	CERAMIC	0.1uF		50V
C355	1-164-159-11	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description			Remarks
C356	1-164-159-11	CERAMIC	0.1uF		50V
C357	1-164-159-11	CERAMIC	0.1uF		50V
C359	1-126-963-11	ELECT	4.7uF	20%	50V
C360	1-126-963-11	ELECT	4.7uF	20%	50V
C363	1-164-159-11	CERAMIC	0.1uF		50V
C365	1-126-966-11	ELECT	33uF	20%	16V
C366	1-164-159-11	CERAMIC	0.1uF		50V
C402	1-126-963-11	ELECT	4.7uF	20%	50V
C403	1-126-964-11	ELECT	10uF	20%	50V
C404	1-162-282-31	CERAMIC	100PF	10%	50V
C405	1-137-459-11	FILM	0.0056uF	5%	100V
C406	1-164-159-11	CERAMIC	0.1uF		50V
C407	1-137-365-11	FILM	0.0015uF	5%	50V
C408	1-162-294-31	CERAMIC	0.001uF	10%	50V
C409	1-126-960-11	ELECT	1uF	20%	50V
C410	1-164-159-11	CERAMIC	0.1uF		50V
C412	1-162-291-31	CERAMIC	560PF	10%	50V
C413	1-164-159-11	CERAMIC	0.1uF		50V
C415	1-164-159-11	CERAMIC	0.1uF		50V
C416	1-164-159-11	CERAMIC	0.1uF		50V
C434	1-162-286-31	CERAMIC	220PF	10%	50V
C435	1-162-286-31	CERAMIC	220PF	10%	50V
C452	1-126-963-11	ELECT	4.7uF	20%	50V
C453	1-126-964-11	ELECT	10uF	20%	50V
C454	1-162-282-31	CERAMIC	100PF	10%	50V
C455	1-137-459-11	FILM	0.0056uF	5%	100V
C457	1-137-365-11	FILM	0.0015uF	5%	50V
C459	1-126-960-11	ELECT	1uF	20%	50V
C460	1-164-159-11	CERAMIC	0.1uF		50V
C602	1-162-288-31	CERAMIC	330PF	10%	50V
C603	1-104-665-11	ELECT	100uF	20%	10V
C605	1-102-233-00	CERAMIC	33PF	10%	500V
C610	1-126-967-11	ELECT	47uF	20%	16V
C611	1-137-372-11	FILM	0.022uF	5%	50V
C620	1-162-286-31	CERAMIC	220PF	10%	50V
C652	1-162-282-31	CERAMIC	100PF	10%	50V
C653	1-104-665-11	ELECT	100uF	20%	10V
C655	1-102-233-00	CERAMIC	33PF	10%	500V
C660	1-126-967-11	ELECT	47uF	20%	16V
C661	1-137-372-11	FILM	0.022uF	5%	50V
C670	1-162-286-31	CERAMIC	220PF	10%	50V
C702	1-162-282-31	CERAMIC	100PF	10%	50V
C703	1-104-665-11	ELECT	100uF	20%	10V
C705	1-102-233-00	CERAMIC	33PF	10%	500V
C710	1-126-967-11	ELECT	47uF	20%	16V
C711	1-137-372-11	FILM	0.022uF	5%	50V
C720	1-162-286-31	CERAMIC	220PF	10%	50V
C721	1-126-934-11	ELECT	220uF	20%	10V
C722	1-126-964-11	ELECT	10uF	20%	50V
C740	1-128-582-11	ELECT	10uF	20%	100V
C741	1-128-582-11	ELECT	10uF	20%	100V
C742	1-126-925-11	ELECT	470uF	20%	10V
C743	1-126-925-11	ELECT	470uF	20%	10V
C752	1-162-282-31	CERAMIC	100PF	10%	50V
C753	1-104-665-11	ELECT	100uF	20%	10V
C755	1-102-233-00	CERAMIC	33PF	10%	500V
C760	1-126-967-11	ELECT	47uF	20%	16V
C761	1-137-372-11	FILM	0.022uF	5%	50V
C770	1-162-286-31	CERAMIC	220PF	10%	50V
C801	1-104-664-11	ELECT	47uF	20%	25V
C802	1-104-664-11	ELECT	47uF	20%	25V
C803	1-128-493-11	ELECT	4700uF	20%	63V
C804	1-128-493-11	ELECT	4700uF	20%	63V
C805	1-137-420-11	FILM	0.047uF	10%	100V
C806	1-137-420-11	FILM	0.047uF	10%	100V
C807	1-104-664-11	ELECT	47uF	20%	25V
C808	1-104-664-11	ELECT	47uF	20%	25V
C809	1-126-960-11	ELECT	1uF	20%	50V
C810	1-126-960-11	ELECT	1uF	20%	50V
C811	1-126-941-11	ELECT	470uF	20%	25V
C812	1-126-941-11	ELECT	470uF	20%	25V
C813	1-101-001-00	CERAMIC	0.001uF		50V
C814	1-101-001-00	CERAMIC	0.001uF		50V
C820	1-161-494-00	CERAMIC	0.022uF		25V
C821	1-161-494-00	CERAMIC	0.022uF		25V
C822	1-104-664-11	ELECT	47uF	20%	25V
C823	1-104-664-11	ELECT	47uF	20%	25V
C950	1-126-767-11	ELECT	1000uF	20%	16V
C951	1-164-097-11	CERAMIC	0.022uF		50V
C952	1-126-960-11	ELECT	1uF	20%	50V
C953	1-124-464-11	ELECT	0.22uF	20%	50V
C954	1-126-096-11	ELECT	10uF	20%	35V
C955	1-164-159-11	CERAMIC	0.1uF		50V
C956	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

CNP702	1-750-388-11	PIN, CONNECTOR 5P
CNS204	1-568-742-11	SOCKET, CONNECTOR 23P
CNS301	1-568-442-11	SOCKET, CONNECTOR 9P
CNS701	1-568-439-11	SOCKET, CONNECTOR 7P
CNS802	1-770-480-11	SOCKET, CONNECTOR PIN 4P

< DIODE >

D610	8-719-911-19	DIODE 1SS119
D710	8-719-911-19	DIODE 1SS119
D721	8-719-911-19	DIODE 1SS119
D722	8-719-911-19	DIODE 1SS119
D723	8-719-911-19	DIODE 1SS119
D724	8-719-911-19	DIODE 1SS119
D725	8-719-911-19	DIODE 1SS119
D801	8-719-986-54	DIODE HZS24-1LTA
D802	8-719-302-38	DIODE RBV-602-01
D804	8-719-109-85	DIODE RD5.1ES-B2
D810	8-719-024-99	DIODE 11ES2-NTA2B
D811	8-719-024-99	DIODE 11ES2-NTA2B
D812	8-719-024-99	DIODE 11ES2-NTA2B
D813	8-719-024-99	DIODE 11ES2-NTA2B
D814	8-719-911-19	DIODE 1SS119
D815	8-719-911-19	DIODE 1SS119
D817	8-719-936-61	DIODE GL-9HY35
D818	8-719-911-19	DIODE 1SS119
D820	8-719-024-99	DIODE 11ES2-NTA2B
D821	8-719-024-99	DIODE 11ES2-NTA2B
D822	8-719-024-99	DIODE 11ES2-NTA2B
D823	8-719-024-99	DIODE 11ES2-NTA2B
D901	8-719-911-19	DIODE 1SS119

MAIN

Ref. No.	Part No.	Description	Remarks
		< TERMINAL >	
* G200	1-537-738-21	TERMINAL, EARTH	
* G201	1-537-738-21	TERMINAL, EARTH	
* G202	1-537-738-21	TERMINAL, EARTH	
		< IC >	
IC300	8-759-442-97	IC LV1016	
IC301	8-759-442-96	IC LA2786	
IC302	8-759-636-74	IC M5218AP-22	
IC401	8-759-805-14	IC LC7822	
IC402	8-759-636-74	IC M5218AP-22	
IC701	8-759-326-52	IC uPC2581V	
IC702	8-759-326-52	IC uPC2581V	
IC801	8-759-231-58	IC TA7812S	
IC802	8-759-604-45	IC M5F79M12	
IC950	8-759-333-83	IC NJM2103D	
		< JACK >	
J401	1-770-614-11	JACK, PIN 4P (PHONO/CD)	
J402	1-580-825-11	JACK, PIN 6P (CD/TAPE/MD)	
J403	1-770-613-11	JACK, PIN 4P (VIDE)	
		< COIL >	
L301	1-410-509-11	INDUCTOR 10uH	
L302	1-410-509-11	INDUCTOR 10uH	
L601	1-420-872-00	COIL, AIR-CORE	
L651	1-420-872-00	COIL, AIR-CORE	
L701	1-420-872-00	COIL, AIR-CORE	
L751	1-420-872-00	COIL, AIR-CORE	
		< TRANSISTOR >	
Q303	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q304	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q307	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q308	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q602	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q603	8-749-010-25	IC MN2488-OPY-M	
Q604	8-749-010-26	IC MP1620-OPY-M	
Q610	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q620	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q651	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q652	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q653	8-749-010-25	IC MN2488-OPY-M	
Q654	8-749-010-26	IC MP1620-OPY-M	
Q670	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q702	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q703	8-749-010-25	IC MN2488-OPY-M	
Q704	8-749-010-26	IC MP1620-OPY-M	
Q710	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q720	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q721	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q722	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q723	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q752	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q753	8-749-010-25	IC MN2488-OPY-M	
Q754	8-749-010-26	IC MP1620-OPY-M	
Q770	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q801	8-729-140-97	TRANSISTOR 2SB734-34	
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q808	8-729-180-92	TRANSISTOR 2SD809-K	
Q809	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q951	8-729-026-68	TRANSISTOR 2SD2525 (TP)	
Q951	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R298	1-249-387-11	CARBON 3.3 5% 1/4W	F
R299	1-249-387-11	CARBON 3.3 5% 1/4W	F
R300	1-247-903-00	CARBON 1M 5% 1/4W	
R301	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R302	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R303	1-249-439-11	CARBON 68K 5% 1/4W	
R304	1-249-441-11	CARBON 100K 5% 1/4W	
R306	1-249-436-11	CARBON 39K 5% 1/4W	
R307	1-247-862-11	CARBON 20K 5% 1/4W	
R308	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R309	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R352	1-249-441-11	CARBON 100K 5% 1/4W	
R353	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R354	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R355	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R356	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R357	1-249-441-11	CARBON 100K 5% 1/4W	
R358	1-249-441-11	CARBON 100K 5% 1/4W	
R359	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R360	1-247-843-11	CARBON 3.3K 5% 1/4W	
R361	1-249-429-11	CARBON 10K 5% 1/4W	
R362	1-249-429-11	CARBON 10K 5% 1/4W	
R363	1-249-411-11	CARBON 330 5% 1/4W	
R401	1-249-417-11	CARBON 1K 5% 1/4W	F
R402	1-247-843-11	CARBON 3.3K 5% 1/4W	
R403	1-249-417-11	CARBON 1K 5% 1/4W	F
R404	1-249-417-11	CARBON 1K 5% 1/4W	F
R405	1-249-417-11	CARBON 1K 5% 1/4W	F
R406	1-249-417-11	CARBON 1K 5% 1/4W	F
R407	1-249-417-11	CARBON 1K 5% 1/4W	F
R408	1-249-426-11	CARBON 5.6K 5% 1/4W	
R410	1-249-437-11	CARBON 47K 5% 1/4W	
R411	1-249-415-11	CARBON 680 5% 1/4W	F
R412	1-247-897-11	CARBON 560K 5% 1/4W	
R413	1-249-437-11	CARBON 47K 5% 1/4W	
R414	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R415	1-249-417-11	CARBON 1K 5% 1/4W	F
R416	1-249-409-11	CARBON 220 5% 1/4W	F
R417	1-249-441-11	CARBON 100K 5% 1/4W	
R420	1-249-441-11	CARBON 100K 5% 1/4W	
R435	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R442	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R443	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R447	1-249-416-11	CARBON 820 5% 1/4W	F
R448	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description			Remarks
R449	1-249-433-11	CARBON	22K	5%	1/4W
R451	1-249-417-11	CARBON	1K	5%	1/4W F
R452	1-247-843-11	CARBON	3.3K	5%	1/4W
R453	1-249-417-11	CARBON	1K	5%	1/4W F
R454	1-249-417-11	CARBON	1K	5%	1/4W F
R455	1-249-417-11	CARBON	1K	5%	1/4W F
R456	1-249-417-11	CARBON	1K	5%	1/4W F
R457	1-249-417-11	CARBON	1K	5%	1/4W F
R458	1-249-426-11	CARBON	5.6K	5%	1/4W
R460	1-249-437-11	CARBON	47K	5%	1/4W
R461	1-249-415-11	CARBON	680	5%	1/4W F
R462	1-247-897-11	CARBON	560K	5%	1/4W
R463	1-249-437-11	CARBON	47K	5%	1/4W
R465	1-249-417-11	CARBON	1K	5%	1/4W F
R466	1-249-409-11	CARBON	220	5%	1/4W F
R467	1-249-441-11	CARBON	100K	5%	1/4W
R470	1-249-441-11	CARBON	100K	5%	1/4W
R601	1-249-417-11	CARBON	1K	5%	1/4W F
R602	1-249-439-11	CARBON	68K	5%	1/4W
R603	1-249-415-11	CARBON	680	5%	1/4W F
R604	1-249-439-11	CARBON	68K	5%	1/4W
R605	1-249-441-11	CARBON	100K	5%	1/4W
R610	1-249-421-11	CARBON	2.2K	5%	1/4W F
R611	1-249-440-11	CARBON	82K	5%	1/4W
R613	1-249-414-11	CARBON	560	5%	1/4W F
⚠R614	1-249-408-11	CARBON	180	5%	1/4W F
⚠R615	1-249-408-11	CARBON	180	5%	1/4W F
⚠R616	1-233-352-21	ENCAPSULATED COMPONENT			
⚠R617	1-249-393-11	CARBON	10	5%	1/4W F
R618	1-249-389-11	CARBON	4.7	5%	1/4W F
R619	1-249-405-11	CARBON	100	5%	1/4W F
R620	1-249-419-11	CARBON	1.5K	5%	1/4W F
R621	1-249-426-11	CARBON	5.6K	5%	1/4W
R622	1-249-403-11	CARBON	68	5%	1/4W F
R623	1-249-437-11	CARBON	47K	5%	1/4W
R630	1-249-426-11	CARBON	5.6K	5%	1/4W
R632	1-249-426-11	CARBON	5.6K	5%	1/4W
R651	1-249-417-11	CARBON	1K	5%	1/4W F
R652	1-249-439-11	CARBON	68K	5%	1/4W
R653	1-249-415-11	CARBON	680	5%	1/4W F
R654	1-249-439-11	CARBON	68K	5%	1/4W
R655	1-249-441-11	CARBON	100K	5%	1/4W
R660	1-249-421-11	CARBON	2.2K	5%	1/4W F
R661	1-249-440-11	CARBON	82K	5%	1/4W
R663	1-249-414-11	CARBON	560	5%	1/4W F
⚠R664	1-249-408-11	CARBON	180	5%	1/4W F
⚠R665	1-249-408-11	CARBON	180	5%	1/4W F
⚠R666	1-233-352-21	ENCAPSULATED COMPONENT			
⚠R667	1-249-393-11	CARBON	10	5%	1/4W F
R668	1-249-389-11	CARBON	4.7	5%	1/4W F
R670	1-249-419-11	CARBON	1.5K	5%	1/4W F
R671	1-249-426-11	CARBON	5.6K	5%	1/4W
R672	1-249-431-11	CARBON	15K	5%	1/4W
R673	1-249-437-11	CARBON	47K	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W F
R702	1-249-439-11	CARBON	68K	5%	1/4W
R703	1-249-415-11	CARBON	680	5%	1/4W F
R704	1-249-439-11	CARBON	68K	5%	1/4W
R705	1-249-441-11	CARBON	100K	5%	1/4W
R710	1-249-421-11	CARBON	2.2K	5%	1/4W F
R711	1-249-440-11	CARBON	82K	5%	1/4W
R713	1-249-414-11	CARBON	560	5%	1/4W F
⚠R714	1-249-408-11	CARBON	180	5%	1/4W F
⚠R715	1-249-408-11	CARBON	180	5%	1/4W F
⚠R716	1-233-352-21	ENCAPSULATED COMPONENT			
⚠R717	1-249-393-11	CARBON	10	5%	1/4W F
R718	1-249-389-11	CARBON	4.7	5%	1/4W F
⚠R719	1-249-405-11	CARBON	100	5%	1/4W F
R720	1-249-419-11	CARBON	1.5K	5%	1/4W F
R721	1-249-426-11	CARBON	5.6K	5%	1/4W
⚠R722	1-249-403-11	CARBON	68	5%	1/4W F
R723	1-249-437-11	CARBON	47K	5%	1/4W
R724	1-249-425-11	CARBON	4.7K	5%	1/4W F
R725	1-249-429-11	CARBON	10K	5%	1/4W
R726	1-249-417-11	CARBON	1K	5%	1/4W F
R727	1-249-427-11	CARBON	6.8K	5%	1/4W F
R730	1-249-429-11	CARBON	10K	5%	1/4W
⚠R740	1-249-393-11	CARBON	10	5%	1/4W F
⚠R741	1-249-393-11	CARBON	10	5%	1/4W F
R742	1-249-425-11	CARBON	4.7K	5%	1/4W F
R743	1-249-425-11	CARBON	4.7K	5%	1/4W F
R751	1-249-417-11	CARBON	1K	5%	1/4W F
R752	1-249-439-11	CARBON	68K	5%	1/4W
R753	1-249-415-11	CARBON	680	5%	1/4W F
R754	1-249-439-11	CARBON	68K	5%	1/4W
R755	1-249-441-11	CARBON	100K	5%	1/4W
R760	1-249-421-11	CARBON	2.2K	5%	1/4W F
R761	1-249-440-11	CARBON	82K	5%	1/4W
R763	1-249-414-11	CARBON	560	5%	1/4W F
⚠R764	1-249-408-11	CARBON	180	5%	1/4W F
⚠R765	1-249-408-11	CARBON	180	5%	1/4W F
⚠R766	1-233-352-21	ENCAPSULATED COMPONENT			
⚠R767	1-249-393-11	CARBON	10	5%	1/4W F
R768	1-249-389-11	CARBON	4.7	5%	1/4W F
R770	1-249-419-11	CARBON	1.5K	5%	1/4W F
R771	1-249-426-11	CARBON	5.6K	5%	1/4W
R772	1-249-431-11	CARBON	15K	5%	1/4W
R773	1-249-437-11	CARBON	47K	5%	1/4W
⚠R803	1-247-739-11	CARBON	100	5%	1/2W F
R804	1-249-425-11	CARBON	4.7K	5%	1/4W F
R821	1-249-437-11	CARBON	47K	5%	1/4W
R822	1-249-425-11	CARBON	4.7K	5%	1/4W F
R823	1-249-437-11	CARBON	47K	5%	1/4W
R824	1-249-425-11	CARBON	4.7K	5%	1/4W F
R825	1-249-407-11	CARBON	150	5%	1/4W F
⚠R830	1-249-405-11	CARBON	100	5%	1/4W F
⚠R831	1-249-403-11	CARBON	68	5%	1/4W F
R950	1-249-421-11	CARBON	2.2K	5%	1/4W F
R951	1-249-429-11	CARBON	10K	5%	1/4W
R952	1-247-843-11	CARBON	3.3K	5%	1/4W
R953	1-249-433-11	CARBON	22K	5%	1/4W
R954	1-249-439-11	CARBON	68K	5%	1/4W
R955	1-249-429-11	CARBON	10K	5%	1/4W
R956	1-247-843-11	CARBON	3.3K	5%	1/4W
R957	1-249-417-11	CARBON	1K	5%	1/4W F
R958	1-249-401-11	CARBON	47	5%	1/4W F
R960	1-249-429-11	CARBON	10K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN **PRIMARY** **SECONDARY** **STANDBY** **SW** **VR-TONE**

Ref. No.	Part No.	Description	Remarks
		< RELAY >	
RY601	1-515-921-11	RELAY (12V)	
RY701	1-515-921-11	RELAY (12V)	
RY801	1-755-013-11	RELAY	
		< TERMINAL >	
TM1	1-537-240-51	TERMINAL BOARD (CHECKER PIN) (ANTENNA)	
TM601	1-537-510-11	TERMINAL BOARD (6P)(SURROUND SPEAKER)	
TM701	1-537-376-11	TERMINAL BOARD (SP) (FRONT SPEAKER)	
		< TUNER >	
TU001	1-233-593-11	ENCAPSULATED COMPONENT	
		< VIBRATOR >	
X301	1-579-952-11	VIBRATOR, CERAMIC 8MHz	
**********			
*	1-665-273-11	PRIMARY BOARD	
		**********	
		< FUSE >	
⚠F901	1-576-109-11	FUSE 5A/125V	
		< HOLDER >	
FH901	1-533-233-21	HOLDER, FUSE	
FH951	1-533-233-21	HOLDER, FUSE	
**********			
*	1-665-274-11	SECONDARY BOARD	
		**********	
		< CONNECTOR >	
CNP801	1-764-480-11	PIN, CONNECTOR (PC BOARD) 11P	
		< RESISTOR >	
⚠R810	1-249-381-11	CARBON 1 5% 1/4W F	
⚠R811	1-249-381-11	CARBON 1 5% 1/4W F	
**********			
*	1-665-272-11	STANDBY BOARD	
		**********	
		< CONNECTOR >	
CNP802	1-779-495-11	PLUG, CONNECTOR PIN 4P	
CNP901	1-564-321-00	PIN, CONNECTOR 2P	
CNP903	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D816	8-719-911-19	DIODE 1SS119	
		< TERMINAL >	
* G900	1-537-738-21	TERMINAL, EARTH	
		< RESISTOR >	
⚠R901	1-202-725-00	SOLID 3.3M 10% 1/2W	

Ref. No.	Part No.	Description	Remarks
		< RELAY >	
⚠RY901	1-755-018-11	RELAY	
		< TRANSFORMER >	
⚠T902	1-450-361-11	TRANSFORMER, POWER	
**********			
*	A-4407-460-A	SW BOARD, COMPLETE	
		**********	
		< CONNECTOR >	
CNP702	1-770-378-11	CONNECTOR, BOARD TO BOARD 5P	
CNP704	1-764-473-11	PIN, CONNECTOR (PC BOARD) 3P	
		< JACK >	
J741	1-750-731-11	JACK (LARGE TYPE) (PHONES)	
		< RESISTOR >	
R741	1-247-753-11	CARBON 1.2K 5% 1/2W	
R742	1-247-753-11	CARBON 1.2K 5% 1/2W	
R791	1-247-753-11	CARBON 1.2K 5% 1/2W	
R792	1-247-753-11	CARBON 1.2K 5% 1/2W	
		< SWITCH >	
S701	1-762-319-11	SWITCH, PUSH (2 KEY) (SPEAKERS)	
**********			
*	A-4407-429-A	VR-TONE BOARD, COMPLETE	
		**********	
		< CAPACITOR >	
C420	1-162-207-31	CERAMIC 22PF 5% 50V	
C421	1-137-440-11	FILM 0.018uF 5% 50V	
C422	1-124-463-00	ELECT 0.1uF 20% 50V	
C423	1-137-368-11	FILM 0.0047uF 5% 50V	
C424	1-137-372-11	FILM 0.022uF 5% 50V	
C425	1-126-795-11	ELECT 10uF 20% 25V	
C426	1-126-795-11	ELECT 10uF 20% 25V	
C427	1-124-252-00	ELECT 0.33uF 20% 50V	
C428	1-130-489-00	MYLAR 0.033uF 5% 50V	
C429	1-102-973-00	CERAMIC 100PF 5% 50V	
C430	1-126-301-11	ELECT 1uF 20% 50V	
C431	1-126-301-11	ELECT 1uF 20% 50V	
C432	1-126-795-11	ELECT 10uF 20% 25V	
C433	1-126-795-11	ELECT 10uF 20% 25V	
C470	1-162-207-31	CERAMIC 22PF 5% 50V	
C471	1-137-440-11	FILM 0.018uF 5% 50V	
C472	1-124-463-00	ELECT 0.1uF 20% 50V	
C473	1-137-368-11	FILM 0.0047uF 5% 50V	
C474	1-137-372-11	FILM 0.022uF 5% 50V	
C475	1-126-795-11	ELECT 10uF 20% 25V	
C476	1-126-795-11	ELECT 10uF 20% 25V	
C477	1-124-252-00	ELECT 0.33uF 20% 50V	
C478	1-130-489-00	MYLAR 0.033uF 5% 50V	
C479	1-102-973-00	CERAMIC 100PF 5% 50V	
C492	1-124-464-11	ELECT 0.22uF 20% 50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remarks
C601	1-126-163-11	ELECT	4.7uF	20%	50V	
C651	1-126-163-11	ELECT	4.7uF	20%	50V	
C701	1-126-163-11	ELECT	4.7uF	20%	50V	
C751	1-126-163-11	ELECT	4.7uF	20%	50V	
		< CONNECTOR >				
CNP202	1-770-391-11	PIN, CONNECTOR (PC BOARD) 7P				
CNS402	1-568-439-11	SOCKET, CONNECTOR 7P				
CNS403	1-568-442-11	SOCKET, CONNECTOR 9P				
		< DIODE >				
D238	8-719-313-50	DIODE SEL6810A-TH12				
D421	8-719-911-19	DIODE 1SS119				
		< IC >				
IC404	8-759-636-74	IC M5218AP-22				
		< TRANSISTOR >				
Q401	8-729-202-67	TRANSISTOR 2SK246-GR3				
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK				
Q451	8-729-202-67	TRANSISTOR 2SK246-GR3				
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK				
		< RESISTOR >				
R420	1-249-415-11	CARBON	680	5%	1/4W	F
R421	1-249-430-11	CARBON	12K	5%	1/4W	
R422	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R423	1-247-903-00	CARBON	1M	5%	1/4W	
R424	1-247-903-00	CARBON	1M	5%	1/4W	
R425	1-249-429-11	CARBON	10K	5%	1/4W	
R426	1-249-439-11	CARBON	68K	5%	1/4W	
R427	1-249-417-11	CARBON	1K	5%	1/4W	F
R430	1-249-437-11	CARBON	47K	5%	1/4W	
R431	1-247-843-11	CARBON	3.3K	5%	1/4W	
R432	1-247-883-00	CARBON	150K	5%	1/4W	
R433	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R434	1-249-413-11	CARBON	470	5%	1/4W	F
R438	1-249-441-11	CARBON	100K	5%	1/4W	
R441	1-249-441-11	CARBON	100K	5%	1/4W	
R444	1-247-903-00	CARBON	1M	5%	1/4W	
R464	1-247-903-00	CARBON	1M	5%	1/4W	
R469	1-247-903-00	CARBON	1M	5%	1/4W	
R470	1-249-415-11	CARBON	680	5%	1/4W	F
R471	1-249-430-11	CARBON	12K	5%	1/4W	
R472	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R473	1-247-903-00	CARBON	1M	5%	1/4W	
R474	1-247-903-00	CARBON	1M	5%	1/4W	
R475	1-249-429-11	CARBON	10K	5%	1/4W	
R476	1-249-439-11	CARBON	68K	5%	1/4W	
R477	1-249-417-11	CARBON	1K	5%	1/4W	F
R480	1-249-437-11	CARBON	47K	5%	1/4W	
R481	1-247-843-11	CARBON	3.3K	5%	1/4W	
R482	1-247-883-00	CARBON	150K	5%	1/4W	
R483	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R484	1-249-413-11	CARBON	470	5%	1/4W	F
R491	1-249-441-11	CARBON	100K	5%	1/4W	
R492	1-247-903-00	CARBON	1M	5%	1/4W	
R494	1-247-903-00	CARBON	1M	5%	1/4W	

Ref. No.	Part No.	Description	Remarks
		< VARIABLE RESISTOR >	
RV404	1-225-229-11	RES, VAR, CARBON 100KX4	(MASTER VOLUME)
RV421	1-223-362-11	RES, VAR, CARBON 100K/100K (BASS)	
RV422	1-223-363-11	RES, VAR, CARBON 125K/125K (TREBLE)	
RV423	1-225-447-11	RES, VAR, CARBON 100K/100K (BALANCE)	
		< SWITCH >	
S240	1-762-378-11	SWITCH, TACTILE (BASS BOOST)	
**********			
		MISCELLANEOUS	
		**********	
10	1-782-100-11	WIRE (FLAT TYPE) (23 CORE)	
11	1-782-075-11	WIRE (FLAT TYPE) (9 CORE)	
12	1-782-074-11	WIRE (FLAT TYPE) (7 CORE)	
⚠71	1-777-070-21	CORD, POWER	
⚠CNJ903	1-251-698-11	OUTLET (AC) (2P)	
⚠T901	1-431-258-21	TRANSFORMER, POWER	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-710-11	COMMANDER, STANDARD (RM-U302)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-659-41	ANTENNA (FM)	
	3-862-095-11	MANUAL, INSTRUCTION (ENGLISH)	
	4-981-643-01	COVER, BATTERY (FOR RM-U302)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 IT-3	
#2	7-685-881-09	SCREW +BVTT 4 × 8 (S)	
#3	7-685-872-09	SCREW +BVTT 3 × 8 (S)	

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9-922-830-11

Sony Corporation
Home A&V Products Company

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